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CATALOGUE

OF THE

This Volume (XXVII.) being ready first, is issued in advance of Vols. XXIV., XXV., and XXVI., which will be published in the course of next year.

W. H. FLOWER,
Director.

December 20, 1895.

VOLUME XXVII.

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PRINTED BY ORDER OF THE TRUSTEES.
1895.

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CATALOGUE

OF THE

BIRDS

IN THE

BRITISH MUSEUM.

VOLUME XXVII.

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1895.

CATALOGUE

OF THE

CHENOMORPHÆ

(PALAMEDEÆ, PHŒNICOPTERI, ANSERES),

CRYPTURI,

AND

RATITÆ

IN THE

COLLECTION

OF THE

BRITISH MUSEUM.

BY

T. SALVADORI.

LONDON:
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PREFACE.

The numbers of the species of Birds treated of in this Volume, and of the specimens at present in the Collection, are as follows :—

	Species.	Types.	Specimens.
Chenomorphæ	205	31	5044
Crypturi	65	29	363
Ratitæ	26	7	134

In none of the preceding volumes has the number of desiderata been so small as in the present; only eight species of the Anseres, seven of the Tinamous, and four of the Ratitæ being entirely unrepresented by specimens in the Museum. Beside the 67 types of recognized species, the Collection contains 25 other typical specimens which are now regarded as referable to species previously named and described.

The unrivalled collection of Tinamous formed by Messrs. Godman and Salvin, and supplemented by the loan of numerous specimens from Continental Museums, has enabled the author to discriminate considerably more species than his predecessors were inclined to admit.

The Hon. Walter Rothschild, whose collection of *Apteryx* far surpasses that in the British Museum, has given most valuable assistance in the preparation of this Catalogue by lending these as well as other specimens to the author.

The present volume concludes the series of the 'Catalogue of Birds.' Thanks to the energy with which Count Salvadori has

applied himself to the work, its publication precedes that of Volumes 24, 25, and 26. However, it will be followed immediately by Volume 25, which contains the Gulls and Petrels, while it is a matter of regret that no such prospect can be held out as regards the other two volumes. In a final volume it is intended to give a supplementary list of the species described since the publication of the several volumes, and an Index to the whole work.

ALBERT GÜNTHER,
Keeper of the Department of Zoology.

British Museum (N. H.),
September 6, 1895.

INTRODUCTION.

The present volume contains the account of the Chenomorphæ (Palamedeæ, Phœnicopteri, and Anseres), Crypturi, and Ratitæ.

As to the *Chenomorphæ*, the *Palamedeæ* and the *Phœnicopteri* contain only a few species, the great bulk consisting of the *Anseres*. The literature relating to these is very scattered, and few works are specially devoted to them. The first attempt at a complete account was Eyton's 'Monograph of the Anatidæ, or Duck Tribe,' published in 1838.

Between 1845 and 1850 Dr. Reichenbach, in the 'Synopsis Avium,' gave rather indifferent figures, mostly copies, of the 'Natatores' known in his time.

Prince Bonaparte, in 1856, published the "Conspectus Anserum Systematicus" (Compt. Rend. xliii. pp. 648–652), with a nominal list of 172 species known to him.

Schlegel, in 1866, published in the 'Muséum des Pays-Bas' an account of the 'Anseres' contained in the Leyden Museum (pp. 122); they numbered 1199 specimens, belonging to 140 species.

In 1869 Eyton published for private circulation a 'Synopsis of the Anatidæ,' by which our knowledge was not advanced.

G. R. Gray, in 1871, in the 'Hand-list,' gave a nominal list of all the species then known, about 183, of which some cannot be maintained.

Although not of a general character, the "Revision of the Neotropical Anatidæ" (P. Z. S. 1876, pp. 358–412), published by Sclater and Salvin, may be considered the best essay hitherto written on this suborder. A very important contribution also is Sclater's "List of the certainly known Species of Anatidæ" (P. Z. S. 1880, pp. 496–536); the species included in this paper amount to 176.

The number of species recognized in the present Catalogue is 196,

besides a few of a more doubtful character; three are now described for the first time.

In the Classification of the Anseres, I have closely followed that proposed by Sclater and Salvin in 1876 (*l. c.*), and by Sclater in 1880, the only new feature in my arrangement being the institution of a new subfamily, *Chenonettinæ*, the members of which have the external appearance of Geese, but the males have a larynx furnished with a bulla ossea, as in *Anatinæ*.

Not much has hitherto been done in the systematic and descriptive treatment of the order *Crypturi*.

Wagler published in 1827, with excellent latin descriptions, Monographs of the genera *Crypturus*, *Nothura*, and *Rhynchotus*, containing all the species then known.

Gray, in 1867, in the 'List of the Gallinæ in the British Museum,' gave an account, with descriptions of many new species, of the whole group, numbering about 55 species. A nominal list of the same appears in the 'Hand-list' (1871).

Finally Schlegel, in the 'Muséum des Pays-Bas,' published in 1880 a Monograph of the 'Tinami,' pp. 1–57; the species mentioned by him number 33, represented by 134 specimens.

The species recognized in the present volume amount to 65, of which 14 are described as new.

In working out the Tinamous I have received much assistance from Messrs. Salvin and Sclater; the latter has put at my disposal notes which he had prepared some time ago with the intention of bringing out, in conjunction with Mr. Salvin, a Monograph of the group.

The taxonomic characters of the *Ratitæ* have been much less studied than their morphology.

Prince Bonaparte, in the 'Comptes Rendus' (xliii. p. 841, 1856), gave a nominal 'Conspectus' of the Struthious birds, with some scattered notes; but to Mr. Sclater we owe the first complete account of them. In 1860 he read before the Zoological Society a paper "On the Struthious Birds living in the Society's Menagerie," which was published in 1862, in the 'Transactions of the Zoological Society of London,' vol. iv. pp. 353–364, pls. lxvii. *a*–lxxvi.

Schlegel, in 1873, published in the 'Muséum des Pays-Bas' a

Monograph of the 'Aves Struthiones,' represented in that museum by 37 specimens, belonging to 14 species. In 1877 J. de Mosenthal and J. E. Harting published a volume on 'Ostriches and Ostrich Farming,' which contains a useful *résumé* of our knowledge of Struthious Birds.

In working out these three groups of birds I have found that of the Anseres most laborious, on account of the exceedingly great number of references and of the many phases of plumage through which these birds pass, and which are not always easy to understand. The study of the Tinamous is very difficult, especially as the limits of variation seem wide and the species often ill-defined; a very extensive series of specimens is necessary in order to arrive at any definite conclusion. Fortunately I have been helped by many friends, either with suggestions or with the loan of rare and typical specimens; and I desire to express my thanks particularly to Mr. Salvin, Mr. Sclater, Mr. Seebohm, the Hon. W. Rothschild, Mr. Hartert, Prof. A. Newton, Dr. Oustalet, Dr. Dubois, Dr. Reichenow, Graf von Berlepsch, Canon Tristram, Dr. Forbes, Mr. Ridgway, Mr. Allen, Dr. Hartlaub, Prof. Barboza du Bocage, Dr. Schauinsland, Dr. Stolzmann, and Prof. P. Godet.

T. SALVADORI.

Turin, Zoological Museum,
August, 1895.

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3. mantelli, *Bartl.* 607
4. oweni, *Gould* 609
5. occidentalis, *Rothsch.* . 610
6. haasti, *Potts* 611

CATALOGUE

OF

BIRDS.

—•—

Order XIX. CHENOMORPHÆ.

This Order, the name of which has been proposed by Huxley, comprises all those Carinate birds which combine at least the following two characters :—

Palate desmognathous; young covered with down and able to run or swim in a few hours after hatching.

The other common characters of the group are :—

Neck long, without apteria; oil-gland tufted; wings aquinto-cubital; rhamphotheca with ceroma; nares pervious; maxillo-palatines coalesced across the middle line; mandible much produced and curved upwards behind its articulation with the quadrate; flexor perforans digitorum leading to all three anterior digits, but not to the hallux; ambiens muscle present. Eggs white.—Range cosmopolitan. Habits aquatic.

Synopsis of the Suborders.

a. No uncinate processes on the ribs; margins of the bill not laminated. 1. **PALAMEDEÆ**, p. 2.

b. Uncinate processes on the ribs; margins of bill laminated.

a'. Tarsus three times the length of the femur, scutellated in front and at back; bill abruptly bent in the middle ..... 2. **PHŒNICOPTERI**, p. 8.

b'. Tarsus about the length of the femur, reticulated at back and generally in front; bill straight, always with a distinct nail at the tip of the upper mandible. 3. **ANSERES**, p. 23.

Suborder I. PALAMEDEÆ.

Beside the absence of uncinate processes to the ribs, a unique character among birds, the Screamers are distinguished from the other Chenomorphæ by the median basipterygoid processes, the absence of a ventral and almost of any other bare tract, the tarsus being less than one and a half times the length of the femur, reticulated in front and behind, the anterior toes being connected by rudimentary webs, and by non-laminated margins of the bill.

In external appearance the Screamers present the following features:—Head small, neck covered with small soft feathers. Bill of a gallinaceous shape, much shorter than the head, with the base rather thick, and covered with soft skin; nostrils oblong, broad, situated rather lower down; dertrum short, convex, with the tip obtuse, bent down.

Wings large, rounded, broad, with the secondaries very large *; carpal portion with two spurs, the anterior one much the largest.

Tail of 14 or 12 feathers, broad, nearly half the length of the wing.

Feet thick, moderately high; tibiæ naked inferiorly; toes very long, the median one subequal to the tarsus, united at the base by a short membrane; feet covered with small hexagonal scales, disposed transversely on the toes; nails rather strong, the posterior one the largest; hallux long and strong.

The Screamers are confined to the Neotropical Region.

One family only.

Family PALAMEDEIDÆ.

Key to the Genera.

a. Lores feathered; a long frontal horn; head not crested; tail-feathers 14 ..... 1. PALAMEDEA, p. 2.

b. Lores naked; no frontal horn; head crested; tail-feathers 12 ..... 2. CHAUNA, p. 4.

1. PALAMEDEA.

Type.

Anhima, *Briss. Orn.* v. p. 518 (1760).

Palamedea, *Linn. S. N.* i. p. 232 (1766) ..... P. cornuta.

Range. Guiana, Amazonia, and Ecuador.

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* It is not quite certain whether the Screamers are aquintocubital, as stated by Gadow (P. Z. S. 1892, p. 243), or quintocubital, as more recently asserted by Beddard and Mitchell (P. Z. S. 1894, p. 536).

1. Palamedea cornuta.

Anhima, *Marcgr. Hist. Bras.* p. 215 (with figure); *Briss. Orn.* v. p. 518 (1790).

Palamedea, *Moehr. Av.* p. 84, gen. iii. (1752).

Palamedea cornuta, *Linn. S. N.* i. p. 232, n. 1 (1766); *Gm. S. N.* i. 2, p. 615, n. 1 (1788); *Lath. Ind. Orn.* ii. p. 669, n. 1 (1790); *Geoffr. Bull. Sc. Soc. Philom.* i. 2, p. 50 (1797); *Illig. Prodr. M. & Av.* p. 253 (1811); *Licht. Abh. Ak. Wissensch. zu Berl.* 1816–17, p. 172; *Cuv. Règne An.* i. p. 499 (1817); *Vieill. N. D.* xvii. p. 21 (1817); *Wied, Reise nach Bras.* i. pp. 328, 343, 366 (1820); *Dum. Dict. Sc. Nat.* xxiv. p. 339 (1822); *Vieill. Enc. Méth.* iii. p. 1040, pl. 47. f. 1 (1823); *Steph. Gen. Zool.* xii. 1, p. 278, pl. 35 (1824); *Vieill. Gal. des Ois.* ii. p. 154, pl. 261 (1825); *Ranz. El. di Zool.* iii. 8, p. 29, t. 25. f. 4 (1825); *Wagl. Syst. Av., gen.* Palamedea, sp. 1 (1827); *Less. Man. d'Orn.* ii. p. 286 (1828); *Cuv. Règn. An.* 2nd ed. i. p. 536 (1829); *Less. Tr. d'Orn.* p. 525, pl. 92. f. 1 (1831); *Wied, Beitr.* iv. p. 585 (1832) (Belmonte); *Less. Compl. de Buff., Ois.* vii. p. 501 (1836); *id. op. cit.* 2nd ed. p. 252 (1838); *Sw. Class. B.* ii. p. 351 (1837); *Nitzsch, Pterylogr.* p. 174 (1840); *Martin, P. Z. S.* 1842, p. 15 (habits); *G. R. Gr. List B. Brit. Mus.* iii. p. 114 (1844); *id. Gen. B.* iii. p. 590, pl. 160. f. 2 (head) (1846); *Rchnb. Syn. Av.*, Rasores, t. 196. ff. 1136–37 (1848); *Cab. in Schomb. Reise*, iii. p. 751, n. 363 (1848); *Rchnb. Av. Syst. Nat.* p. xxi, t. xix. (1852); *Licht. Nom. Av.* p. 88 (1854); *Des Murs in Casteln. Erpéd. Am. du Sud, Ois.* p. 85 (1855); *Burm. Syst. Uebers. Thier. Bras.* iii. p. 396 (1856); *Bp. Compt. Rend.* xliii. p. 598, n. 284 (1856); *Hartl. J. f. O.* 1857, p. 49 (*ex Des Murs*); *Crisp, P. Z. S.* 1864, p. 14; *Schleg. De Dierent.* fig. p. 265 (1864); *id. Mus. P.-B.*, Ralli, p. 72 (Guiana) (1865); ?*Léot. Ois. de l'isle de Trinid.* p. 488 (1866) (= P. derbyana?, *cf. P. Z. S.* 1866, p. 417); *Sclat. & Salv. P. Z. S.* 1866, p. 200 (Upper Ucayali); *Nitzsch, Pterylogr.* (Engl. ed.) p. 121 (1867); *Reinh. Nat. For. Vid. Medd.* 1870, p. 22 (R. das Velhas); *Pelz. Orn. Bras.* pp. 313, 458, lviii (1870) (Ypanema, Engenho do Cap Gama am Ufer der Guaporé, Cachoeira da Bananeira, Cara raucu am Amazonenfluss); *G. R. Gr. Hand-list*, iii. p. 71, n. 10541 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 133 (1872); *Sclat. & Salv. P. Z. S.* 1873, p. 304 (Huallaga); *iid. Nomencl. Av. Neotrop.* p. 128 (1873); *Garrod, P. Z. S.* 1876, p. 189; *Gieb. Thes. Orn.* iii. p. 12 (1877); *Rchnw. Orn. Centralbl.* 1882, p. 40; *id. Vög. Zool. Gärt.* p. 72 (1882); *Sundev. Ibis*, 1882, p. 325 (note); *Salv. Ibis*, 1886, p. 172; *Tacz. Orn. Pér., Tables*, p. 122 (1886); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (Venezuela) (1887); *Allen, Bull. Am. Mus. N. H.* ii. no. 2, p. 110 (Bolivia) (1889); *Sclat. P. Z. S.* 1890, p. 589 (Zool Gard.); *Hartert, Kat. Vogelsamml.* p. 225 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 312 (1891); *A. Newt. Dict. of B.* pt. iii. p. 819 (1894).

Kamichi, *D'Aubent. Pl. Enl.* 451 (1770); *Buff. Hist. Nat. Ois.* vii. p. 335 (1780).

Horned Screamer, *Lath. Syn.* iii. 1, p. 18, n. 1, pl. 74 (1785).

Palamedea bispinosa, *Humb. Rec. d'observ. de Zool. et d'Anat. Comp.* i. pp. 3, 5, 6, 7, t. ii. no. 4, ff. 1, 2, 3, 4 (trachea & larynx) (1805).

Anhima cornuta, *Stejn. Stand. Nat. Hist.* iv. *Birds*, pp. 183, 184, 185, f. 62 (1885).

ANATOMY: *see* Beddard & Mitchell, P. Z. S. 1894, pp. 536–557.

Adult male. Feathers of the top of the head black, mixed with white ones; neck and upper parts glossy black, feathers of the lower part of the neck in front and on the sides grey, with a black band at the tip; breast black; abdomen white; under tail-coverts black; wings glossy black, but the smaller wing-coverts white, those near the median black edged with white; carpal edge white; base of the primaries, including the base of the shafts, white; under wing-coverts whitish; tail black: "iris bright orange; upper mandible dark brown-grey, lower mandible paler; frontal horn yellowish white; legs and feet ashy grey" (*Wied*). Total length about 34 inches, wing 22·5, tail 11, culmen 1·4, tarsus 4·4.

Female. Similar to the male, but, according to Prince Neuwied, the grey feathers of the neck are shorter, the anterior part of the head and the upper neck more brownish; a female in the British Museum has the smaller wing-coverts buff.

Hab. Guiana, Venezuela, and Amazonia, west as far as Ecuador and Eastern Peru.

a. Ad. sk.	S. America.	
b. ♀ ad. sk.	Upper Ucayali.	E. Bartlett, Esq. [C.].
c. Ad. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.

d. Right metacarpus.

2. CHAUNA.

	Type.
Chauna, *Illig. Prodr. Mamm. et Av.* p. 253 (1811)	C. cristata.
Chavaria, *Rafinesque, Analyse*, p. 70 (1815).	
Opistholophus, *Vieill. Analyse*, pp. 60, 70 (1816).....	C. cristata.
Ischyrornis, *Rchnb. Av. Syst. Nat.* p. xxi (1852)	C. chavaria.
Ischyornis, *Bp. Compt. Rend.* xliii. p. 598, gen. 100 (1856).	

Range. Confined to South America.

Key to the Species.

a. General plumage slate-black; cheeks and throat white, sharply defined from the black neck .. *chavaria*, p. 4.
b. General plumage dark grey; cheeks and throat grey; a naked ring round the neck ..... *cristata*, p. 6.

1. Chauna chavaria.

Parra chavaria, *Linn. S. N.* i. p. 260, n. 8 (1766) (Carthagena, *Jacquin*); *Gm. S. N.* i. 2, p. 709, n. 5 (1788); *Lath. Ind. Orn.* ii. p. 264, n. 9 (1790).
Faithful Jacana, *Lath. Syn.* iii. 1, p. 246, n. 9 (1785).
Palamedea chavaria, *Geoffr. Bull. Sc. Soc. Philom.* i. 2, p. 50 (1797) (Carthagena).
Chavaria, *Sonn. in Buff. Hist. Nat.* lix. p. 227 (an. xiii.).
Chauna chavaria, part., *Illig. Prodr. M. et A.* p. 254 (1811); *Cuv.*

Règn. An. i. p. 499 (part.) (1817); *Steph. Gen. Zool.* xii. 1, p. 272 (part.) (1824); *Cuv. Règn. An.* 2nd ed. i. p. 536 (part.) (1829); *Sclat. P. Z. S.* 1863, p. 377 (New Grenada); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (1887) (Venezuela).

Opisthol ophus chavaria, *Vieill. Analyse*, p. 60 (1816).

Opisthol ophus fidelis, part., *Vieill. N. D.* vi. p. 206 (1816).

Chauna fidelis, part., *Ranz. Elem. di Zool.* iii. 8, p. 33 (1825).

Chauna derbiana, *G. R. Gr. Gen. B.* iii. p. 591, n. 2, pl. 160 (1846); *Salv. & Sclat. Ibis*, 1860, p. 402 (Peten!); *Sclat. P. Z. S.* 1863, p. 377, 1864, p. 75, 1865, p. 676; *Moore, P. Z. S.* 1866, pp. 368, 369; *Sclat. ibid.* pp. 369, 370, p. 417 (Trinidad); *id. P. Z. S.* 1871, p. 102 (Santa Martha); *Sundev. Meth. nat. Av. disp. Tent.* p. 133 (1872); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128 (1873) (Colombia); *Bodinus, J. f. O.* 1874, p. 94 (Zool. Gart.); *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 71 (1882); *Sclat. List Vert. An.* 8th ed. p. 414 (1883); *Ed. Ibis*, 1888, p. 270 (Venezuela); *A. Newt. Dict. of B.* pt. iii. p. 820 (1894).

Ischyrornis derbyana, *Rchnb. Av. Syst. Nat.* p. xxi (1852); *G. R. Gr. Hand-list*, iii. p. 71, n. 10543 (1871).

Ischyornis derbyana, *Bp. Compt. Rend.* xliii. p. 598, n. 286 (1856).

Palamedea derbyana, *Schleg. De Dierent.* p. 266 (1864); *id. Mus. P.-B.*, Ralli, p. 72 (1865) (Bogotá); *Gieb. Thes. Orn.* iii. p. 12 (1877).

Chauna nigricollis, *Sclat. P. Z. S.* 1864, p. 75, pl. xi. (New Granada), 1865, p. 676, 1866, p. 369 (=derbyana).

? Palamedea cornuta, *Léot. Ois. de l'isle de Trinid.* p. 488 (1866) (=C. derbyana, *cf. P. Z. S.* 1866, p. 417).

ANATOMY: *see* Parker, P. Z. S. 1863, pp. 511, 518; id. Ann. & Mag. N. H. (3) xiv. pp. 144–150 (1864); Garrod, P. Z. S. 1875, p. 348, 1876, pp. 189–200 (cut of the skull, p. 198), pls. xii., xiii., xiv., xv.; Forbes, P. Z. S. 1877, pp. 307, 309, f. 1 (cloaca); id. Ibis, 1881, pp. 11, 22; Beddard, P. Z. S. 1886, pp. 178, 181; Sclater, Ibis, 1886, p. 150, f. 2 (manus).

Adult. General colour slate-black, upper parts glossy, underparts paler; upper part of the head dark grey; occipital crest blackish grey; cheeks, sides of the head, and throat white, sharply defined from the black, which forms a broad collar round the median part of the neck; feathers of the lower part of the neck, of the underparts, and also the smaller wing-coverts, more or less with paler edgings; coverts of the carpal edge broadly edged with white; primary-coverts slightly edged with white on the inner web; under wing-coverts white; primaries and tail-feathers slaty black: bill and feet red (?). Total length about 28 inches, wing about 19, tail 9, culmen 1·5, tarsus 4·4.

Hab. Venezuela and Colombia.

a. Ad. st.	[Jamaica.]	Zool. Soc.
b. Ad. st.	Cartagena, Venezuela.	Zool. Soc.
c. ♂ ad. sk.	Cartagena (Zool. Soc.).	Salvin-Godman Coll.
d. ♂ ad. skeleton.	Cartagena.	Salvin-Godman Coll.
e. Bones of the trunk.		Zool. Soc.

2. Chauna cristata.

Chajá, *D'Azara, Apunt.* i. p. 106, n. 341 (1805); *id. Voy. (ed. Sonn.)* iv. p. 179 (1809); *Dumont, Dict. Sc. Nat.* viii. p. 60 (part.) (1816).

Chauna chavaria, *Illig. Prodr. M. et A.* p. 254 (part.) (1811); *Cuv. Règn. An.* i. p. 499 (1817); *Steph. Gen. Zool.* xii. 1, p. 272 (part.) (1824); *Less. Man. d'Orn.* ii. p. 287 (1828); *Cuv. Règn. An.* 2nd ed. i. p. 536 (1829); *Less. Compl. de Buff., Ois.* vii. p. 503 (1836); *id. op. cit.* 2nd ed. p. 252 (1838); *Hartl. Verz. Ges. Mus.* p. 114 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 114 (1844); *id. Gen. B.* iii. p. 591, n. 1, pl. 160. f. 1 (head) (1846); *Hartl. Ind. Azara's Apunt.* p. 22, n. 341 (1847); *Rchnb. Syn. Av.* Rasores, t. 196. ff. 1134*-35 (1848); *id. Av. Syst. Nat.* p. xxi (1852); *Licht. Nomencl. Av.* p. 88 (1854); *Bp. Compt. Rend.* xliii. p. 598, n. 285 (1856); *Burm. J. f. O.* 1858, p. 153; *Crisp, P. Z. S.* 1864, pp. 14–16 (anatomy); *Sclat. P. Z. S.* 1864, p. 75, 1866, p. 370; *Sclat. & Salv. P. Z. S.* 1868, p. 145 (Conchitas); *Pelz. Orn. Bras.* pp. 314, 458, lviii (1870) (Cuyaba, Villa Maria, Rio do Cabaçal, Matogrosso, Rio Guaporé); *G. R. Gr. Hand-list*, iii. p. 71, n. 10542 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 133 (1872); *Sclat. P. Z. S.* 1872, p. 603 (Zool. Gard.); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128 (1873); *Hudson, P. Z. S.* 1876, p. 108; *Garrod, P. Z. S.* 1876, pp. 189, 190; *Durnf. Ibis*, 1876, p. 162, 1877, p. 190 (egg and nest: Buenos Ayres), 1878, p. 63 (Buenos Ayres); *Gibson, Ibis*, 1879, pp. 415, 417, 1880, pp. 165–167 (habits: Buenos Ayres); *Durnf. Ibis*, 1880, p. 425; *White, P. Z. S.* 1882, p. 625; *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 71 (1882); *Sclat. List Vert. An.* 8th ed. p. 414 (1883); *Barrows, Auk*, 1884, p. 272 (Entrerios); *Stejn. Stand. Nat. Hist.* iv. *Birds*, p. 134 (1885); *Goodchild, ibid.* p. 196; *Newt. Enc. Brit.* 6th ed. xxi. p. 552 (1886); *Berl. J. f. O.* 1887, p. 124; *Sclat. Argent. Orn.* ii. p. 119 (1889); *id. P. Z. S.* 1889, p. 586 (egg similar to that of the Geese); *id. Ibis*, 1890, pp. 425, 427 (chick); *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 322 (Paraguay) (1890); *Frenzel, J. f. O.* 1891, p. 125; *Hartert, Kat. Vogelsamml.* p. 225 (1891); *Frenzel, J. f. O.* 1891, p. 125 (Cordoba); *Kerr, Ibis*, 1891, p. 270, 1892, p. 146 (Lower Pilcomayo); *Holland, ibid.* pp. 206, 208; *Aplin, Ibis*, 1894, p. 200 (Uruguay); *Lydekker, ibid.* pp. 268, 269 (habits); *A. Newt. Dict. of B.* pt. iii. p. 819 (1894).

Opisthol ophus fidelis, part., *Vieill. N. D.* vi. p. 206 (1816); *id. Enc. Méth.* iii. p. 1043 (1823); *id. Gal. des Ois.* ii. p. 156, pl. 262 (1825).

Palamedea chavaria, *Temm. (nec Linn.) Pl. Col.* 219 (livr. 37, 1823); *Wagl. Syst. Av., gen.* Palamedea, sp. 2 (1827); *Less. Tr. d'Orn.* p. 526, n. 2 (1831); *Wied, Beitr.* iv. p. 584 (1832) (Rio Grande do Sul); *Nitzsch, Pterylogr.* p. 174 (1840); *Hartl. J. f. O.* 1854, p. 257 (Zool. Gard.); *Burm. Syst. Uebers. Th. Bras.* iii. p. 397 (1856); *id. J. f. O.* 1860, p. 262 (Paraná, Uruguay); *id. La-Plata Reise*, ii. p. 506 (Paraná) (1861); *Schleg. De Dierent.* p. 236 (1864); *id. Mus. P.-B.*, Ralli, p. 72 (Chili!) (1865); *Nitzsch, Pterylogr.* Engl. ed. p. 121 (1867); *Sternb. J. f. O.* 1869, pp. 277, 278 (habits: Buenos Ayres); *Ludwig, J. f. O.* 1870, p. 20 (egg); *Gieb. Thes. Orn.* iii. p. 12 (1877); *Helm, J. f. O.* 1884, pp. 333, 352.

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* Fig. 1134 with the underparts white!

Chauna fidelis, part., *Ranz. Elem. di Zool.* iii. 8, p. 33 (1825).
Palamedea cristata, *Sw. Class. B.* ii. p. 351 (1837) (*ex Pl. Col.* 219).
Palamedea lophyra, *Natt. Cat. MS., teste Pelz. Orn. Bras.* p. 314 (1870).

Adult male. General colour dark grey; upper parts glossy slate-grey, underparts paler, belly whitish; chin and cheeks whitish grey; middle part of the neck black, with a naked ring all round; occipital crest dark grey; feathers of the breast slaty grey, paler on the edges; smaller wing-coverts along the cubit with pale edges; primary-coverts white on the inner edges, the innermost also on the outer; inner primaries white at the base; under wing-coverts white; tail slaty black: bill (?); iris brown; feet red. Total length about 36 inches, wing 20·5, tail 9, culmen 1·5, tarsus 4·5.

Female. Similar.

Young in down. Of a yellow-brown colour; head light rust-colour, neck pale grey, back pale chocolate; wings and breast grey: iris wood-brown; feet brick-red (*Durnford*).

Hab. Argentine Republic, Paraguay, Uruguay, and Southern Brazil.

a, *b*. ♀ ad. st.	[Cayenne.]	Purchased.
c. ♀ ad. sk.	Rio Guaporé, July (*Natterer*).	Salvin-Godman Coll.
d. ♂ juv. st.	Paraguay.	J. H. Gurney, Esq. [P.].
e. ♀ ad. sk.	La Plata, Nov. (*E. W. White*).	Salvin-Godman Coll.
f. Juv. st.	Buenos Ayres.	Purchased.
g. Pull. sk.	Buenos Ayres, Feb.	H. Durnford, Esq. [C.].
h. Skeleton.		Zool. Soc.

Suborder II. PHŒNICOPTERI.

Ribs with uncinate processes; basipterygoid processes absent or very rudimentary; lacrymo-nasal region elongated; frontalia narrow, not covering the orbits above; grooves for orbital glands present; cæca well developed; a ventral bare tract; wing aquintocubital; tarsus three times the length of the femur, scutellated in front and behind; anterior toes fully webbed; margin of bill laminated.

Besides, the Flamingoes have a very long neck, with 18 or 19 cervical vertebræ, the bill abruptly bent in the middle and more or less pointed, the tongue large and thick, the general plumage of a rosy colour, which on the wing-coverts changes into bright crimson red. They build a nest with mud, and lay only one white egg; the young are covered with whitish down, and nidifugous, and have the bill straight.

Flamingoes are tropical birds.

On the anatomy of the Flamingoes, see Owen, "On the Anatomy of the Flamingo" (P. Z. S. 1832, pp. 141–144); Milne-Edwards, "Caractères ostéologiques de la Famille des Phœnicoptérides" (Oss. Foss. ii. pp. 35–52, 1869–71); Garrod, P. Z. S. 1873, pp. 460, 467 (both carotids), p. 638 (muscles); Gadow, "Anatomie des *Phœnicopterus roseus* und seine Stellung im System" (J. f. O. 1877, pp. 382–396, pl. 6. figs. 1 *a*, 1 *b*); Weldon, W. F. R., "On some Points in the Anatomy of *Phœnicopterus* and its allies" (P. Z. S. 1883, pp. 638–652, pls. lix., lx.); Parker, W. K., "On the 'Manus' of *Phœnicopterus*" ('Ibis,' 1889, pp. 183–185); Shufeldt, "Note on the Anserine Affinities of the Flamingoes" ('Science,' 1889, pp. 224, 225).

One family only.

Family PHŒNICOPTERIDÆ.

Key to the Genera.

a. Upper mandible overlapping the lower lamellæ on the edges of the upper mandible almost perpendicular; throat naked. 1. PHŒNICOPTERUS, p. 9.

b. Upper mandible included between the rami of the lower one; lamellæ on the edges of the upper mandible more or less horizontal; throat feathered.

a'. Hind toe present; lamellæ on the edges of the upper mandible smaller ..... 2. PHŒNICONAIAS, p. 18.

b'. Hind toe absent; lamellæ on the edges of the upper mandible very prominent and quite horizontal ..... 3. PHŒNICOPARRUS, p. 21.

1. PHŒNICOPTERUS

Type.
Phœnicopterus, *Linn. S. N.* i. p. 230 (1766) ..... P. ruber.
Phœnicorodias (subgen.), *G. R. Gr. Ibis*, 1869, p. 441..... P. ruber.

Range. Palæarctic, Ethiopian, Indian, and Neotropical Regions.

Key to the Species.

a. General plumage vermilion-red ..... *ruber*, p. 9.
b. General plumage rosy white ; wings rosy red.
a'. Apical black part of the bill not reaching the bend ..... *roseus*, p. 12.
b'. Apical black part of the bill extended above the bend ..... *chilensis*, p. 16.

1. Phœnicopterus ruber.

Phœnicopterus americanus, *Seba*, *Mus.* i. p. 103, tab. lxvii. f. 1 (1734).
Phœnicopterus phœniceus, *Barr. Hist. Fr. Eq.* p. 140 (1743).
Phœnicopterus gujanensis, *Barr. Orn. Class.* i. p. 21, gen. viii. sp. 3 (1745).
Phœnicopterus bahamensis, *Catesb. Carol.* i. p. 73, pl. 73 (good), p. 74, pl. 74 (head) (Bahamas, Cuba) (1754).
Phœnicopterus, *Brown, Nat. Hist. of Jam.* p. 480 (Cuba, Jamaica) (1756).
Phœnicopterus ruber, part., *Linn. S. N.* ed. 10, gen. 72, sp. 1 (1758).
Phœnicopterus, part., *Briss. Orn.* vi. p. 532, pl. xlvii. f. 1 (1760) ; *Gerini, Stor. degli Ucc.* v. tav. 496 (1776).
Phœnicopterus ruber, part., *Linn. S. N.* i. p. 230, n. 1 (1764) ; *Scop. Ann. I. Hist. Nat.* n. 114 (part.) (1769) ; *Gm. S. N.* i. 2, p. 612, n. 1 (part.) (1788) ; *Lath. Ind. Orn.* ii. p. 788, n. 1 (part.) (1790) ; *Geoffr. Bull. Sc. Soc. Philom.* i. 2, n. 13, p. 98 (part) (1798) ; *Illig. Prodr.* p. 270 (part.) (1811) ; *Temm. Man.* p. 378 (part.) (1815) ; *Vieill. N. D.* xxv. p. 517 (part.) (1817) ; *Dum. Dict. Sc. Nat.* xvii. p. 96 (part.) (1820) ; *Steph. Gen. Zool.* xii. 1, p. 186 (part.) (1824).
Phœnicopterus ruber, *Bonn. Enc. Méth.* i. p. 162 (1790) (Amérique méridionale) ; *Wils. Am. Orn.* viii. p. 45, pl. 66 (1814) ; *Temm. Man. d'Orn.* 2nd ed. p. 587 (note) (1820) ; *Brehm, Lehrb. d. Naturgesch. alle eur. Vög.* ii. p. 652 (1824) ; *Bp. Ann. Lyc. N. Y.* ii. p. 348, n. 282 (1826) ; *id. Specch. Comp.* p. 67, n. 218 (1827) ; *Temm. Pl. Col., genre Flamnant*, esp. 2 (livr. 71, 1827) ; *Bp. Syn.* n. 282 (1828) ; *Drapiez, Dict. Class.* xiii. p. 362 (1828) ; *Bp. Isis*, 1832, p. 1177, n. 282 ; *Nutt. Man.* ii. p. 70 (1834) ; *Bp. Comp. List*, p. 54, n. 363 (1838) ; *Aud. Orn. Biogr.* v. p. 255, pl. 431 (1839) ; *id. Syn.* p. 269 (1839) ; *id. B. Am.* vi. p. 169, pl. 375 (1843) ; *Hartl. Verz. Ges. Mus.* p. 116 (1844) ; *G. R. Gr. List B. Brit. Mus.* iii. p. 125 (1844) ; *Rchnb. Syn. Av.*, Natatores, t. 108. f. 417 (1845) ; *G. R. Gr. Gen. B.* iii. p. 603, n. 2 (1846) ; *Denny, P. Z. S.* 1847, p. 39 (Jamaica) ; *Gosse, B. Jam.* p. 390 (1847) (Jamaica, Cuba) ; *Hartl. Isis*, 1847, p. 606 (W. Indies) ; *Cab. in Schomb. Guiana*, iii. p. 761 (1848) (Coast of British Guiana and Bird Island) ; *Licht. Nom. Av.* p. 90 (1854) (Brazil !) ; *Bp. Consp. Gen. Av.* ii. p. 145 (1855) ; *id. Compt. Rend.* xl. p. 724

n. 140 (1855), xliii. p. 992 (1856); *Bolle, J. f. O.* 1856, p. 165 (Zool. Gard.); *Cab. & Gundl. J. f. O.* 1856, p. 432 (Cuba); *Sallé, P. Z. S.* 1857, p. 236 (San Domingo); *Thienem. J. f. O.* 1857, p. 155 (egg); *Cass. in Baird's B. N. Am.* p. 687 (1858) (Florida Keys); *Baird, Cat. N. Am. B.* n. 502 (1859); *A. & E. Newt. Ibis*, 1859, p. 365 (St. Croix?); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 121 (1859) (Bahamas); *Hurdis, Natural. in Bermuda*, p. 55 (1859); *Martens, J. f. O.* 1859, p. 219 (Bermuda); *Würdem. Ann. Rep. Smiths. Inst.* 1860, pp. 426–430 (Cape Sable and the Keys)*; *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (1860) (Cuba); *Albrecht, J. f. O.* 1861, p. 55 (Bahamas), 1862, p. 206 (Jamaica); *March, Pr. Acad. Philad.* 1864, p. 65 (Jamaica); *Schleg. Mus. P.-B.*, Anseres, p. 117 (1866); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 386 (1866); *Sclat. P. Z. S.* 1866, p. 418 (Zool. Gard.); *Bryant, Pr. Bost. Soc. N. H.* xi. p. 97 (1867) (San Domingo); *Eyton, Osteol. Av.* pl. 4 K. pl. 28. f. 2 (1869); *G. R. Gr. Ibis*, 1869, p. 443, pl. xv. f. 7 (head); *Pelz. Orn. Bras.* pp. 318, 459, lviii (1871) (Praia de Cajutuba, near Pará); *Coues, Key N. Am. B.* p. 278 (1872); *id. Check-list N. Am. B.* n. 475 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 127, n. 1 (1873) (Mexico); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 368 (Cuba); *Salv. Tr. Zool. Soc.* ix. p. 498 (1875) (Galapagos); *A. Newt. Ibis*, 1876, p. 99; *Rchnw. J. f. O.* 1877, p. 229; *Gieb. Thes. Orn.* iii. p. 109 (1877); *Gundl. Anal. Soc. Esp. Hist. Nat.* vii. p. 398 (1878) (Porto Rico); *id. J. f. O.* 1878, p. 190; *Ridgw. Pr. U.S. Nat. Mus.* 1880, p. 231; *Cory, B. Bahama I.* p. 180 (1880); *A. & E. Newt. Handb. Jam.* p. 112 (1881); *Mayn. B. of E. N. Am.* p. 435 (1881); *Cory, Bull. Nutt. Orn. Club*, vi. p. 155 (1881) (Haiti); *Ridgw. Nom. N. Am. B.* n. 585 (1881); *Rchnw. Vög. Zool. Gärt.* p. 134 (1882); *Coues, Check-list*, 2nd ed. p. 110, n. 687 (1882); *Sclat. List Vert. An.* 8th ed. p. 413 (1883) (Zool. Gard.); *Boucard, P. Z. S.* 1883, p. 458 (Yucatan); *Tristr. Ibis*, 1884, p. 168 (San Domingo); *B., B., & R. Water-B. N. Am.* i. p. 415 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 679, n. 687 (1884); *Salvin, Ibis*, 1885, p. 186 (Cozumel I.); *Cory, B. Haiti & San Domingo*, p. 165 (1885); *id. List B. W. Ind.* p. 28 (1885); *Stejn. Stand. Nat. Hist.* iv. *Birds*, p. 154 (1885); *Salvin, Ibis*, 1886, p. 172; *A. O. U. Check-list*, p. 130, n. 182 (1886); *Ridgw. Man. N. Am. B.* p. 121, n. 182 (1887); *Blake, The Nineteenth Century*, 1887, pp. 886–890 (breeding habits) (*cf. Ibis*, 1887, pp. 150–152); *Blake, J. f. O.* 1888, p. 302 (Bahamas); *Cory, Auk*, 1888, p. 323 (Bahamas and Greater Antilles); *id. B. W. Ind.* p. 244 (1889); *Tristr. Cat. Coll. B.* p. 52 (1889) (Cuba); *Ridgw. Pr. U.S. Nat. Mus.* xii. p. 114 (1889) (Galapagos); *Scott, Auk*, vii. pp. 221–226 (1890) (Florida); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 289 (1891); *A. Newt. Dict. of B.* pt. i. p. 257 (1893).

Flammant ou Phénicoptère, part., *Buff. Hist. Nat. Ois.* viii. p. 375, pl. 39 (1781).

Red Flamingo, part., *Lath. Syn.* iii. 1, p. 299, n. 1, pl. 93 (1785).

Phœnicopterus chilensis, part., *Less. Man. d'Orn.* ii. p. 243 (1828).

Phœnicopterus bahamensis, *Less. Tr. d'Orn.* p. 589, n. 2 (1831) (N. America).

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* Letter relative to the obtaining of specimens of Flamingoes and other Birds from South Florida (*l. c.*).

Phœnicopterus americanus, *Wied, Erste Reise nach Nord-Amer.* p. 73 (1835) (*cf. Gundl. J. f. O.* 1871, p. 267); *Sw. Class. B.* ii. p. 364 (1837); *D'Orb. in La Sagra's Hist. Nat. Cuba, Ois.* p. 157, t. 29 (1840); *Lemb. Aves Cuban.* p. 133 (1850); *Gundl. J. f. O.* 1856, p. 432 (Cuba); *id. J. f. O.* 1871, pp. 272, 278 (Cuba).

Phœnicopterus erythræus, *J. & E. Verr. Rev. et Mag. de Zool.* 1855, p. 221 (type. Gabon!); *G. R. Gr. Ibis*, 1869, p. 442, pl. xiv. f. 6 (head); *id. Hand-list*, iii. p. 72, n. 10545 (1871).

Phœnicopterus glyphorhynchus, *G. R. Gr. Ibis*, 1869, pp. 439, 442, pl. xiv. f. 5 (head, Galapagos); *id. Hand-list*, iii. p. 72, n. 10546 (1871); *Salv. Tr. Zool. Soc.* ix. p. 498 (1875) (= Ph. ruber, *L.*); *Gieb. Thes. Orn.* iii. p. 108 (1877); *A. Newt. Dict. of B.* pt. i. p. 257(1893).

Phœnicopterus (Phœnicorodias) ruber, *G. R. Gr. Hand-list.* iii. p. 72, n. 10550 (1871).

Flamingo, *Darwin, Natural. Voy.* new ed. p. 66 (1882) (Galapagos).

? Phœnicopterus ignipalliatus *s.* ruber ?, *Berl. J. f. O.* 1892, p. 104 (Curaçao); *E. Peters, ibid.* p. 122.

Phœnicopterus sp., *Hartert, Ibis*, 1893, p. 307 (Aruba), p. 335 (Bonaire).

Adult. General plumage light vermilion, lighter on the scapulars, more intense on the wings; primaries, secondaries, and primary-coverts black; axillaries bright red: bill yellowish with the terminal third black; irides brown; feet and legs lake-red. Total length about 42–48 inches, wing 15–16, tail 6, culmen 5·2, tarsus 12–14·5.

Young. Greyish white, with mesial dusky lines on the back and wings; the greater coverts broadly tipped with brown-black.

Downy young. "Greyish white, becoming nearly pure white on forehead, cheeks, median line of back, whole rump, and median underparts: bill pale brownish, dusky terminally, naked lores dusky; legs and feet brownish black; bill nearly straight" (*Ridgway*).

Hab. Tropical and subtropical sea-coasts, from Florida Keys and coast of Gulf States to Northern South America, as far south as Pará and Galapagos Islands.

The type of *Ph. erythræus* no doubt belongs to this species; it has evident signs of having been kept in captivity, and one of the tarsi was amputated while the bird was alive. The locality Gaboon, attributed to this bird, is evidently wrong.

a. Ad. st.	No locality.	Purchased.	
b. Ad. sk.	Inagua, Bahamas (*Maynard*).	Salvin-Godman Coll.	
c. Juv. sk.	Northern Yucatan (*E. C. J. Devis*)	Salvin-Godman Coll.	
d. Ad. sk.	Galapagos (*Kellett & Wood*).	Pandora Exped. (Type of *Ph. glyphorhynchus*, Gray.)	
e. Ad. sk.	[Gaboon.]	Purchased. (Type of *Ph. erythræus*, Verr.)	

2. Phœnicopterus roseus.

Phœnicopterus roseus, *Barr. Orn. Class.* i. p. 21, gen. viii. sp. 2 (1745).

Phœnicopterus plinii, *Klein, Avi.* p. 126, lit. B.

Phœnicopterus, *Briss. Orn.* vi. p. 532 (part.), pl. xlvii. f. 1 (1760).

Phœnicopterus ruber, part., *Linn. S. N.* i. p. 230, n. 1 (1766); *Gm. S. N.* i. 2, p. 612, n. 1 (part.) (1788); *Lath. Ind. Orn.* ii. p. 788, n. 1 (part.) (1790); *Geoffr. Bull. Sc. Soc. Philom.* i. 2, n. 13, p. 98 (part.), pl. —. ff. 4, 5, 6 (head) (1798); *Illig. Prodr.* p. 270 (part.) (1811); *Temm. Man. d'Orn.* p. 378 (part.) (1815); *Vieill. N. D.* xxv. p. 517 (part.) (1817); *Dum. Dict. Sc. Nat.* xvii. p. 96 (part.) (1820); *Temm. op. cit.* 2nd ed. ii. p. 587 (part.) (1820); *Steph. Gen. Zool.* xii. 1, p. 186 (part.), pl. 24 (1824).

Fenicottero, *Cetti, Ucc. Sard.* p. 294 (with plate) (Sardinia) (1776).

Flammant ou Phénicoptère, part., *Buff. Hist. Nat. Ois.* viii. p. 475 (1781).

Red Flamingo, *Lath. Syn.* iii. 1, p. 299, n. 1 (1785); *id. Syn. Suppl.* i. p. 263 (1787).

Phœnicopterus ruber, var. *a*, *Bonn. Enc. Méth.* i. p. 162, pl. 42. f. 3 (1791).

Phœnicopterus roseus, *Pall. Zoogr. Rosso-As.* ii. p. 207 (1811) (Caspian); *K. & B. Wirbelth. Eur.* pp. lxxxi, 221 (1840); *Bp. Icon. Faun. Ital., Ucc. Introdr.* p. 15 (1841); *id. Cat. Met. Ucc. Eur.* p. 68 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 125 (1844); *Rüpp. Syst. Uebers.* p. 137, n. 483 (1845) (Lower Egypt); *Blyth, Cat. B. Mus. A. S. B.* p. 299, n. 1750 (1849) (*excl. var.* minor); *Layard, Ann. & Mag. N. H.* xiv. p. 268 (Ceylon) (1854); *Bolle, J. f. O.* 1855, p. 314 (Spain); *Bp. Consp. Gen. Av.* ii. p. 145 (1855); *id. Compt. Rend.* xl. p. 724, n. 142 (1855), xliii. p. 992 (1856); *Heugl. Syst. Uebers.* no. 675 (1856); *Loche, Cat. M. et O. Algér.* p. 103 (1858); *Adams, P. Z. S.* 1858, p. 50 (Punjab); *Homey. J. f. O.* 1862, p. 424 (Balearic Isl.); *Radde, Reis. S.O.-Sibir.* ii. p. 347 (Lake Baikal) (1863); *Wright, Ibis*, 1864, p. 149 (Malta); *Jerd. B. of Ind.* iii. p. 775, n. 944 (part.) (1864); *Salvad. Cat. Ucc. Sard.* p. 99 (1864); *id. J. f. O.* 1866, p. 318 (Sardinia); *Degl. & Gerbe, Orn. Eur.* ii. p. 334 (1867); *Taylor, Ibis*, 1867, p. 70 (Egypt); ? *Blyth, Ibis*, 1867, p. 174 (India); *Drake, ibid.* p. 430 (Morocco); *Dodert. Avif. Sicil.* p. 221 (1869); *Heugl. Peterm. Geogr. Mitth.* 1869, p. 408; *Heugl. Reis. in d. Geb. d. Weiss. Nil*, p. 384 (1869); *Saund. Ibis*, 1869, p. 178 (Spain); *Hume, Ibis*, 1870, p. 142 (Sambhur Lake); *Wright, Ibis*, 1870, p. 492 (Malta); *Severtz. Turkest. Jevotn.* p. 70 (1870); *Milne-Edw. Rech. Ois. Foss.* ii. p. 36 (1869-71); *Homey. J. f. O.* 1870, p. 429 (Lake Baikal); *Saund. Ibis*, 1871, p. 394 (Spain, breeding); *Salvad. Faun. d'Ital., Ucc.* p. 248 (1872); *Hume, Str. Feath.* i. p. 257 (1873) (Sindh); *Elwes, P. Z. S.* 1873, p. 649 (Mongolia ?); *Brooks, Ibis*, 1873, p. 341 (Sardinia); *Wright, Ibis*, 1874, p. 238 (Malta); *Legge, Ibis*, 1875, p. 407 (Ceylon); *Severtz. J. f. O.* 1875, p. 184; *Dress. Ibis*, 1876, p. 422 (Turkestan); *Butler, Str. Feath.* iv. p. 25 (N. Guzerath) (1876); *Fairb. ibid.* p. 264 (Dakhan) (1876); *Gadow, J. f. O.* 1877, pp. 382–396, pl. vi. ff. 1 *a*, 1 *b* (intestines); *Butl. Str. Feath.* v. p. 234 (N. Guzerath), p. 287 (Gulf of Oman) (1877); *Davids. & Wend. Str. Feath.* vii. p. 92 (Deccan) (1878); *Murr. ibid.* p. 112 (Sindh) (1878); *Dress. B. of Eur.* vi. p. 343, pl. 410 (1879); *Vidal, Str. Feath.* ix. p. 91 (S.

Konkan) (1880); *Butler, ibid.* p. 436 (Deccan) (1880); *Legge, B. of Ceyl.* p. 1092 (1880); *Gigl. Ibis*, 1881, p. 212; *Rchnw. Vög. Zool. Gärt.* p. 134 (1882); *Nathusius, J. f. O.* 1882, p. 295 (egg); *Seebh. Ibis*, 1882, p. 227 (Kirghiz), 1883, p. 33 (Caucasus); *Radde, Ornis Caucas.* p. 439 (1884); *Tristr. Faun. & Flor. of Palest.* p. 113 (1884); *Saund. in Yarrell's Hist. Brit. B.* iv. pp. 244–252, with fig. (1884–85); *Whitehead, Ibis*, 1885, p. 44 (Corsica); *Reid, Ibis*, 1885, p. 250 (Morocco); *Seebh. Hist. Brit. B.* iii. p. 660, pl. 61 (egg) (1885); *Yerbury, Ibis*, 1886, p. 22 (Aden); *Parker, ibid.* p. 188 (Ceylon); *Salvad. El. Ucc. Ital.* p. 249 (1886); *Trois, Atti Ist. Ven.* (6) iv. pp. 125–129 (Venetian) (1886); *Reid, Str. Feath.* x. p. 78 (Lucknow) (1887); *Severtz. Zeitschr. d. ges. Orn.* 1887, p. 23 (Turkestan); *Davids. Str. Feath.* x. p. 325 (W. Kandeish) (1887); *Hume, ibid.* p. 513 (1887) (not breeding in India); *Tait, Ibis*, 1887, p. 375 (Portugal); *Pleske, Rev. Turkest. Ornis*, p. 53 (1888); *Regalia, Proc.-verb. Soc. Tosc. Sc. Nat.* 1888, p. 86 (nail); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 317 (Shoa) (1888); *Koenig, J. f. O.* 1888, pp. 291–295 (Tunis); *Lilf. Ibis*, 1889, p. 344 (Cyprus); *Tristr. Cat. Coll. B.* p. 52 (1889); [*Ed.*] *Zool.* 1889, pp. 136–139; *Hartert, Kat. Vogelsamml.* p. 203 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 288 (1891); *Barnes, Ibis*, 1893, p. 174 (Aden); *Meade-Waldo, ibid.* p. 199 (Canaries).

Phœnicopterus antiquorum, *Temm. Man.* 2nd ed. ii. p. 587 (note) (1820); *Brehm, Lehrb. d. Naturg. aller eur. Vög.* ii. p. 652 (1824); *Bp. Ann. Lyc. N. Y.* ii. p. 348 (note) (1826); *Temm. Pl. Col., genre Flammant*, esp. 1 (livr. 71, 1827); *Bp. Specch. Comp.* p. 67, n. 206 (1827); *id. Syn.* n. 283 (1828); *Drap. Dict. Class.* xiii. p. 362 (1828); *Savi, Orn. Tosc.* ii. p. 363 (1829); *Brehm, Isis*, 1830, p. 989; *id. Vög. Deutschl.* pp. 602, 603 (1831); *Bp. Isis*, 1832, p. 1177; *id. Comp. List*, p. 54, n. 391 (1838); *Naum. Vög. Deutschl.* ix. p. 408, Taf. 233. f. 1 ♂ ad., 2 ♂ jun., 3 ♀ juv. (1838); *Bp. Icon. Faun. Ital., Ucc. Introd.* p. 15 (1841); *Schleg. Rev. Crit.* p. ci (1844); *Hartl. Verz. Ges. Mus.* p. 116 (1844); *Rchnb. Syn. Av.*, Natatores, t. 108. ff. 418, 419, 968 (1845); *G. R. Gr. Gen. B.* iii. p. 603, n. 1 (1846); *P. Z. S.* 1849, p. 941 (Zool. Gard.); *Deleg. Voy. Afr. Austr.* ii. p. — (1847); *Licht. Nom. Av.* p. 60 (Arabia) (1854); *Brehm, J. f. O.* 1854, p. 83 (Egypt); *Bruck, ibid.* p. 278 (Rhein); *Bolle, J. f. O.* 1856, p. 27 (Cape Verd Isl.), p. 165 (Zool. Gard.); *Müll. ibid.* p. 231 (Camargue); *Brehm, ibid.* p. 334 (Upper Egypt); *Buvry, J. f. O.* 1857, p. 134 (Algeria); *Bolle, ibid.* p. 339 (Canaries); *Salv. Ibis*, 1859, p. 361 (E. Atlas); *Homey. J. f. O.* 1859, p. 370 (Zool. Gard.); *Tristr. Ibis*, 1860, p. 78 (N. Africa); *Powys, ibid.* p. 348 (Corfu?); *Des Murs, Traité*, pp. 126, 129, 436–444 (1860); *Homey. J. f. O.* 1863, p. 263 (Algeria), *Extrah.* p. 21; *Parker, P. Z. S.* 1863, p. 517 (vertebræ); *Adams, Ibis*, 1864, p. 33 (Egypt); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *Gigl. Ibis*, 1865, p. 62 (Pisa); *Schleg. Mus. P.-B.*, Anseres, p. 116 (1866); *Tristr. Ibis*, 1868, p. 327 (Palestine); *Saund. P. Z. S.* 1869, p. 432 (eggs, Spain); *G. R. Gr. Ibis*, 1869, p. 441, pl. xiii. ff. 1, 2 (head); *Tacz. J. f. O.* 1870, p. 53 (Constantine); *Droste, Ber.* xviii. *Vers. Orn. Ges.* 1870, p. 80; *Gurn. Ibis*, 1871, p. 297 (Algeria); *Shell. ibid.* p. 314 (Egypt); *G. R. Gr. Hand-list*, iii. p. 72, n. 10544 (1871); *Dohrn, J. f. O.* 1871, p. 9 (Cape Verd); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Shell. B. of Egypt*, p. 272 (1872); *Thien.*

Eier. t. lxx. f. 7; *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1263 (1873); *Garrod, P. Z. S.* 1873, pp. 460, 467 (both carotids), p. 638 (muscles); *Lloyd, Ibis*, 1873, p. 419 (Kattiawar); *Wattle, Reise n. d. südl. Spanien*, ii. p. 9; *Irby, Orn. Str. Gibralt.* p. 193 (1875); *Krüper, J. f. O.* 1875, p. 284 (Smyrna); *Blanf. East. Pers.* ii. p. 300 (Persian Gulf) (1876); *Rchnw. J. f. O.* 1877, p. 227; *Gieb. Thes. Orn.* iii. p. 108 (1877); *Marchand, Rev. et Mag. de Zool.* 1877, p. 357, pl. 11 (pullus); *Hume, Str. Feath.* vii. p. 491 (1879), viii. pp. 114, 949 (1879); *Lilford, P. Z. S.* 1880, p. 446 (S. Spain, breeding); *Johnst. Ibis*, 1881, p. 173 (Tunis, breeding); *Ed. Ibis*, 1881, p. 449; *Saund. Ibis*, 1883, p. 397 (Spain, breeding); *Weld. P. Z. S.* 1883, pp. 638, 639, 651; *Sclat. List Vert. An.* 8th ed. p. 413 (1883); *Stejn. Stand. Nat. Hist.* iv. *Birds*, pp. 154, 156, f. 76 (1885); *Saund. Ibis*, 1886, p. 456; *Koenig, J. f. O.* 1891, p. 291 (Tunis); *St. John, Ibis*, 1889, p. 179 (S. Afghanistan); *Tristr. Cat. Coll. B.* p. 52 (1889) (distinct from *Ph. roseus*!); *Sclat. Ibis*, 1890, p. 81 (aquintocubital); *Saund. Ibis*, 1891, p. 184 (Neuchâtel); *Finn, Ibis*, 1893, p. 238 (Suez); *A. Newt. Dict. of B.* pt. i. p. 257 (1893); *Koenig, J. f. O.* 1893, p. 102 (Tunis).

Phœnicopterus major, *Dum. Dict. Sc. Nat.* xvii. p. 96 (1820); *Brehm, Vög. Deutschl.* p. 603 (1831) (larger var.).

Phœnicopterus ruber, *Boie* (*nec Linn.*), *Isis*, 1822, p. 560, n. 273; *Licht. Verz. Doubl.* p. 79 (Gall. merid., Cap. b. s., Senegamb.) (1823); *Licht. in Eversm. Reise*, i. p. 70 (1823); *Ranz. El. di Zool.* iii. 8. p. 312 (1828); *Less. Man. d'Orn.* ii. p. 243 (1828); *id. Tr. d'Orn.* p. 589, n. 1 (E. & S. Europe) (1831); *Owen, P. Z. S.* 1832, pp. 141–144; *Sykes, P. Z. S.* 1832, p. 159 (Dukhun); *Ménétr. Cat. Rais.* p. 50 (Caspian) (1832); *Smith, Afric. Glen*, 13th ed. p. 25, n. 218 (Cape) (1836); *Gould, B. Eur.* lv. pl. 287 (1837); *Hartl. J. f. O.* 1854, p. 160 (Ceylon); *Brehm, Vögelf.* p. 288 (1855).

Phœnicopterus europæus, *Sw. Class. B.* ii. p. 364 (1837); *Jerd. Madr. Journ.* xii. p. 217, n. 373 (1840).

Phœnicopterus ignipalliatus, *Gr. & Mitch.* (*nec D'Orb. & I. Geoffr.*), *Gen. B.* iii. pl. 163 (1846); *Rchnb. Syn. Av.*, Natatores, t. 107. f. 2363 (1850) (*ex Gr. & Mitch.*).

Phœnicopterus antiquus, *Temm. fide Blyth, Cat. B. Mus. A. S. B.* p. 299 (1849).

Phœnicopterus plinii, *Rchnb. Av. Syst. Nat.* p. x, tab. x. (1852) (*ex Klein*).

Phœnicopterus erythræus, part., *J. & E. Verr. Rev. et Mag. de Zool.* 1855, p. 221 (Algérie, Afrique méridionale, Mozambique); *Bp. Consp. Gen. Av.* ii. p. 146 (part.) (1855); *id. Compt. Rend.* xl. p. 724, n. 144 (1855), xliii. pp. 992, 993 (1856) (Abyssinia, Algeria, Spain, Strasburg!); *Heugl. Syst. Uebers.* p. 65, n. 677 (1856) (Abyssinia); *Hartl. Syst. Orn. W.-Afr.* p. 245 (1857) (St. Thomé); *Loche, Cat. M. et O. Algér.* p. 104 (1858) (Oran et Constantine); *Heugl. Ibis*, 1859, p. 348 (Red Sea, Dakalak, Massaua, Assab); *Cass. Pr. Acad. Philad.* 1859, p. 175 (young, Camma); *id. J. f. O.* 1860, p. 202 (Camma); ? *Sclat. P. Z. S.* 1859, p. 436 (Egypt, Zool. Gard.); *Salvad. Cat. Ucc. Sard.* p. 102 (1864) (Sardinia); *id. J. f. O.* 1865, p. 230 (Sardinia); *Anderss. Ibis*, 1865, p. 64 (S.W. coast of S. Afr.); *Degl. & Gerbe, Orn. Eur.* ii. p. 333 (1867); *Chapm. Trav. in S. Afr.*, App. p. 420 (1868); *Finsch & Hartl. Vög. Ost-Afr.* p. 795 (part.) (1870); *Tacz. J. f. O.* 1870, p. 53 (Constantine); *Heugl. ibid.* p. 385; *Anderss. B. Damara Land*, p. 331 (1872) (W. coast of S. Africa); *Heugl. Orn.*

N.O.-Afr. ii. 2, p. 1267 (1873); *Wright, Ibis,* 1874, p. 227 (Sicily, Malta); ? *Rchnw. J. f. O.* 1874, p. 374 (Gaboon); *Bocage, J. f. O.* 1876, p. 295; *Rchnw. J. f. O.* 1877, p. 228 (subspecies); *Dress. B. of Eur.* vi. p. 349 (1879) (=roseus); *Gigl. Ibis,* 1881, p. 213 (Cagliari); *Boc. Orn. Ang.* p. 489(Angola) (1881); *Sharpe, Layard's B. South Afr.* p. 744 (1884); *Salvad. El. Ucc. Ital.* p. 250 (1886); *Koenig, J. f. O.* 1888, p. 285, 1893, p. 95 (Tunis); *A. Newt. Dict. of B.* pt. i. p. 257 (1893).

Phœnicopterus platyrhynchus, *Brehm, Vögelf.* p. 298 (1855); *id. Naumannia,* 1855, p. 290.

? Phœnicopterus minor, *Brehm* (*nec Geoffr.*) *Vögelf.* p. 298 (1855); *id. Naumannia,* 1855, p. 290.

? Phœnicopterus pygmæus, *Brehm, fide Bp. Compt. Rend.* xliii. p. 993 (1856).

Phœnicopterus roseus, *β.* erythræus, *Blas. List B. of Eur.* n. 330 *β* (1862).

Flamingo, *Barnes's Explor. in South-west Afr.* frontispiece (1864); *Clark, Ibis,* 1870, pp. 439–442 (S. of France); *Chapm. Ibis,* 1884, pp. 71–72, 88–89, pl. iv. (Guadalquivir).

Phœnicopterus antiquorum, var., *G. R. Gr. Ibis,* 1869, p. 442 (India, Ceylon), var. (Cape of Good Hope).

Phœnicopterus erithacus (errore?), *Brooke, Ibis,* 1873, p. 342 (Sardinia).

Phœnicopterus andersoni, *Brooks, Pr. A. S. B.* 1875, pp. 17–48 (Futtehgurh, N.W. Prov. of India); *Hume, Str. Feath.* iii. p. 414 (1875) (=antiquorum, juv.).

Phœnicopterus roseus, *β*, var. parva, *Severtz. J. f. O.* 1875, p. 184 (= roseus, *Pall., cf. Pleske, Rev. Turk. Ornis,* p. 53).

Adult male. General plumage rosy white; tail rather more of a rosy-red tinge; upper and under wing-coverts and axillaries bright scarlet; quills black, tertials rosy; iris pale lemon-yellow; bare skin next the eye and base of bill flesh-pink; terminal portion of the bill and edges of the mandible black; legs and feet pinkish red. Total length about 44 to 53 inches, wing 17, tail 7, culmen 5·6, tarsus 13, bare portion of the tibia 9.

Female. Resembles the male, but is rather smaller in size.

Young. Head, neck, and underparts whitish, slightly tinged with buff, especially on the upper neck; back ashy brown, with dark mesial lines on the feathers; wing-coverts like the back, the larger coverts almost entirely brown; axillaries pale pink; base of the bill dull pinkish; legs dull plumbeous.

Young in down. Whitish, tinged with grey on the upper parts; the bill is quite straight.

Hab. From the basin of the Mediterranean to Lake Baikal; the whole of Africa, India, and Ceylon.

a. Ad. st.	Europe.	Gen. T. Hardwicke [P.].
b. Ad. st.	Europe.	Purchased.
c, d. Ad. et juv. st.		Purchased.
e. Juv. st.		Zool. Soc.
f. Ad. sk.	Marshes of Seville.	The Comte de Paris [P.].
g, h. Ad. st.	Guadalquivir.	Lord Lilford [P.].

i. ♀ ad. sk.	Coto del Rey, April (*H. Saunders*).	Hume Coll.
k. ♂ ad. sk.	Sardinia, Feb. (*Count T. Salvadori*).	Shelley Coll.
l. Pull. sk.	Astrakhan.	Herr Henke [P.].
m. Ad. sk.	Damietta (*Filipponi*).	Shelley Coll.
n, o. Ad. et imm. sk.	Port Said, Aug., April.	Lord Lilford [P.].
p–u. Ad. st.	Lake Mensaleh.	J. W. H. Cuninghame [P.].
v. Juv. sk.	Near Suakim.	Capt. R. H. Penton [P.].
w. Juv. sk.	Cape.	Sir A. Smith [P.].
x. Vix ad. sk.	Palestine.	S. Baroody, Esq. [C.].
y. ♂ ad. sk.	River Kishon, Dec. (*H. B. T.*).	Canon Tristram [P.].
z. Ad. sk.	Mesopotamia (*Jones*).	India Museum [P.].
a′, b′. ♂ ad. et ♀ juv. sk.	Mesopotamia.	Euphrates Exp. [C.].
c′. Ad. sk.	Sindh, Feb.	Hume Coll.
d′. ♂ ad. sk.	Larkana, Jan.	Hume Coll.
e′–l′. ♂ ♀ ad. et juv. sk.	Sambhur, Sept., Jan., Feb. (*R. M. Adam*).	Hume Coll.
m′. Ad. sk.	Delhi.	Hume Coll.
n′, o′. ♀ juv. et imm. sk.	Gurgaon, March (*A. O. H.*).	Hume Coll.
p′. ♂ ad. sk.	Bisowa, Jaipur, March (*A. O. H.*).	Hume Coll.
q′. Ad. sk.	Secunderabad.	
r′, s′. Ad. sk.	Bheema, Etawah, Nov., Dec.	Hume Coll.
t′. Ad. sk.	Mynpoorie, Feb.	Hume Coll.
u′. Ad. sk.	Nasseerabad, Sept.	Major Yerbury [P.].
v′. Ad. sk.	Madras.	R. Cole, Esq. [P.].
w′. Ad. st.	Deccan (*Sykes*).	India Museum [P.].
x′. Juv. sk.	Assam (*McClelland*).	India Museum [P.].
y′–b″. Skeletons.		
c″. Skeleton.	N. Africa.	L. Fraser [C.].
d″. Skeleton.	Egypt.	L. Fraser [C.].
e″. Skeleton.		Zool. Soc.
f″, g″. Skulls.		

3. **Phœnicopterus chilensis.**

Flamant d'Amérique, *D'Aubent. Pl. Enl.* 63 (1770).

Phœnicopterus chilensis, *Mol. Hist. Nat. Chili*, p. 214 (1776) (descr. errata); *Gm. S. N.* i. 2, p. 613, n. 2 (1778); *Lath. Ind. Orn.* ii. p. 789, n. 2 (1790); *Bonn. Enc. Méth.* i. p. 163 (1791); *Geoffr. Bull. Sc. Soc. Philom.* i. 2, n. 13, p. 98 (1798); *Dum. Dict. Sc. Nat.* xxvii. p. 96 (1820); *Steph. Gen. Zool.* xii. 1, p. 189 (1824); *Poepp. Fror. Notiz.* xxv. no. 529, p. 8 (July, 1829) (descr. optima); *id. Bull. Sc. Nat.* 1829, p. 100; *d'Orb. Mag. de Zool.* 1832, fasc. i. p. 2; *Less. Compl. de Buff., Ois.* ix. pp. 482, 485 (1837); *id. op. cit.* 2nd ed. p. 704 (1838); *Bridges, P. Z. S.* 1843, p. 117 (S. Chili); *G. R. Gr. List B. Brit. Mus.* iii. p. 125 (1844); *id. Gen. B.* iii. p. 603, n. 3 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 300, n. 1751 (1849); *Bp. Consp. Gen. Av.* ii. p. 145 (1855); *id. Compt. Rend.* xl. p. 724, n. 141 (1855); *Cass. U.S. Expl. Exp., Mamm. & Orn.* p. 332 (1858); *Schleg. Dierent.* p. 280 (1864); *id. Mus. P.-B.*, Anseres, p. 117 (1866); *Rchnb. J. f. O.* 1877, p. 228; *Hartert,*

Kat. Vogelsamml. p. 204 (1891); *A. Newt. Dict. of B.* p. 257 (pt. 1, 1893).

Chili Flamingo, *Lath. Syn. Suppl.* ii. p. 330 (1801).

Flamenco, *D'Azara, Apunt.* i. p. 133, n. 346 (1805); *id. Voy.* (*ed. Sonn.*) iv. p. 193 (1809).

Phœnicopterus ruber, part., *Vieill. N. D.* xxv. p. 517 (La Plata) (1817); *Temm. Pl. Col., genre* Phœnicopterus, sp. 2 (part.) (livr. 71, 1827).

Phœnicoptère du Chili, *Vieill. N. D.* xxv. p. 520 (1817).

Phœnicopterus ignipalliatus, *D'Orb. & I. Geoffr. St.-Hil. Ann. Sc. Nat.* xvii. p. 454 (Août, 1829) (Buenos Ayres, Corrientes); *Bull. Sc. Nat.* xix. p. 111 (1829); *Less. Tr. d'Orn.* p. 589, n. 3 (1831); *D'Orb. Mag. de Zool.* 1832, prem. fasc. pl. 2; *Isis*, 1834, p. 1094; *Less. Compl. de Buff., Ois.* ix. p. 483 (1837); *id. op. cit.* 2nd ed. p. 703 (1838); *Hartl. Verz. Ges. Mus.* p. 117 (1844); ? *Tsch. Arch. f. Naturg.* 1844, i. p. 313, n. 338 (syn. emend.); ? *id. Faun. Per., Aves*, pp. 53, 304 (1846) *; *G. R. Gr. Gen. B.* iii. p. 603, n. 4 (*nec* pl. 163) (1846); *Hartl. Ind. Azar. Apunt.* p. 22, n. 346 (1847); *Bibra, Denkschr. k. Ak. Wien*, v. p. 131 (1853) (N. Chili); *id. J. f. O.* 1855, p. 57; *Licht. Nomencl. Av.* p. 90 (1854) (Chili, Colombia!); *Burm. Syst. Ueb. Thiere Bras.* iii. pp. 430, 431 (1856) (Brazil); *id. J. f. O.* 1860, p. 265; *id. La Plata-Reise*, ii. p. 512 (1861); *Pelz. Reise Novara, Vög.* p. 136 (1865) (Chili); *Sclat. P. Z. S.* 1867, p. 334 (Chili); *Sclat. & Salv. P. Z. S.* 1868, p. 145 (Conchitas); *iid. Ibis*, 1868, p. 139 (Gregory Bay); *Phil. & Landb. Cat. Av. Chil.* p. 279, n. 169 (1868); *G. R. Gr. Ibis*, 1869, p. 442, pl. xiv. f. 4 (head); ?*Pelz. Orn. Bras.* p. 559 (1871) (Brazil!); *Sclat. P. Z. S.* 1871, p. 627 (Zool. Gard.); *G. R. Gr. Hand-list*, iii. p. 72, n. 10547 (1871); *Burm. P. Z. S.* 1872, p. 364; *Sclat. P. Z. S.* 1872, p. 549 (Rio Negro); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 107, n. 2 (1873); *Tacz. P. Z. S.* 1874, p. 562 (Junin, C. Peru); *Sclat. P. Z. S.* 1876, p. 333 (Upper Amazons, Zool. Gard.); *Gieb. Thes. Orn.* iii. p. 108 (1877); *Durnford, Ibis*, 1877, p. 41 (Chuput, Patagonia); *Tacz. P. Z. S.* 1877, p. 330 (Tumbez); *Durnf. Ibis*, 1878, p. 400 (Centr. Patag.); *Gibson, Ibis*, 1880, p. 156 (Cape San Antonio, Buenos Ayres); *Salv. Cat. B. Strickl. Coll.* p. 527 (1882); *Sclat. List Vert. An.* 8th ed. p. 413 (1883); *Barrows, Auk*, 1884, p. 272 (Pampas); *Tacz. Orn. Pér.* iii. p. 422 (1886); *Berl. J. f. O.* 1887, p. 133 (Paraguay?); *Rahmer, J. f. O.* 1887, tab. ii. f. 2 (head); *Philippi, Ornis*, iv. p. 160 (Antofagasta) (1888); *Burm. Anal. Mus. Nac. Buenos Aires*, iii. p. 247 (1888); *Parker, Ibis*, 1889, p. 183, ff. 1, 2, in p. 184 (osteol. of the manus); *Sclat. Argent. Orn.* ii. p. 117 (1889); *Tristr. Cat. Coll. B.* p. 52 (1889); *Sclat. Ibis*, 1890, p. 81 (aquintocubital), p. 425 (Argentina); *Oust. Miss. Sc. Cap Horn, Ois.* p. 308 (1891); *Frenz. J. f. O.* 1891, p. 124 (Cordoba); *Holland, Ibis*, 1892, p. 206 (Argentina); *Berk. James, New List Chil. B.* p. 9, n. 14 (1892); *Aplin, Ibis*, 1894, p. 199 (Uruguay).

Similar to *P. roseus*, but smaller, tinged with brighter rosy on the lower part of the neck and breast; wings more vermilion; the black apical portion of the bill is more extended, reaching above the bend: "the base of the bill is not rose-colour, but white; legs greenish grey, with darker reddish articulations and toes"

* According to Gray (Ibis, 1869) the bird mentioned by Tschudi is *Ph. ruber*.

(*Burmeister*). Total length about 42 inches, wing 16, tail 5, culmen 5, tarsus 9·5, bare portion of tibia 6.

Young. Head and neck dull whitish, greyish round the eyes and on the neck; lower parts white; feathers of the breast with mesial brown streaks; back and scapulars pale brown, the edges of the feathers whitish; rump and upper tail-coverts white, some brown streaks on the rump; upper wing-coverts brown with paler edges, the smaller ones washed with rosy; primary-coverts brown, with the base rosy; quills brown-black; tail white: "legs yellowish, with bluish-red articulations" (*Burmeister*).

Hab. Southern part of South America, north on the east to Uruguay and Brazil (?), on the west to Chili and C. Peru.

a. Ad. st.	Chili.	T. C. Bridges, Esq. [C.].
b. Ad. sk.	Chili.	Purchased.
c. ♂ vix ad. sk.	Chili.	Purchased.
d. Juv. sk.	Chuput, Patagonia.	H. Durnford, Esq. [P.].

2. PHŒNICONAIAS.

Type.

Phœniconaias (subgen.), *G. R. Gr. Ibis*, 1869, p. 442 .... P. minor.

Range. Southern part of Africa, north as far as Senegal (?) on the west, and Abyssinia on the east; North-western India in winter.

1. Phœniconaias minor.

? Le Flamant, *F. Cauche, Relat. vérit. et Cur. de l'Isle de Madag.* p. 130 (1651) (Madagascar).

? Sambe, *Flacourt, Hist. de Madag.* p. 164 (1661).

Phœnicopterus minor, *Geoffr. Bull. Sc. Soc. Philom.* i. 2, no. 13, p. 98, pl. —. ff. 1, 2, 3 (head) (1798); *Vieill. N. D.* xxv. p. 520, pl. M 20, f. 1 (1817); *Dum. Dict. Sc. Nat.* xvii. p. 26 (1820); *Vieill. Gal. Ois.* ii. p. 183, pl. 273 (1825); *Temm. Pl. Col.* 419 (livr. 71, 1827); *Drap. Dict. Class.* xiii. p. 362 (1828); *Less. Man. d'Orn.* ii. p. 244 (1828); *D'Orb. & I. Geoffr. St.-Hil. Ann. Sc. Nat.* xvii. p. 454 (1829); *id. Bull. Sc. Nat.* xix. p. 112 (1829); *Less. Tr. d'Orn.* p. 589, n. 4 (1831); *D'Orb. Mag. de Zool.* 1832, fasc. 1, p. 2; *Isis*, 1834, p. 1094; *Less. Compl. de Buff., Ois.* ix. p. 482 (1837); *id. op. cit.* 2nd ed. p. 703 (1838); *Jerd. Madr. Journ.* xii. p. 217, n. 374 (1840) (India); *Rüpp. Syst. Uebers.* p. 137, n. 484 (1845) (Southern half of the Red Sea); *Rchnb. Syn. Av.*, Natatores, t. 108. f. 420 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 299 (1849); *Strickl. & Sclat. Contr. Orn.* 1852, p. 159 (Damara-l.); *Brehm, J. f. O.* 1854, p. 84 (Red Sea); *Bp. Consp. Gen. Av.* ii. p. 146 (1855); *id. Compt. Rend.* xliii. p. 993 (1856); *Heugl. Syst. Uebers.* p. 65, n. 676 (1856); *Hartl. Syst. Orn. W.-Afr.* p. 246 (1857); *Heugl. Faun. Roth. Meer*, no. 284; *Anderss. Ibis*, 1865, p. 65 (S. Africa); *Layard, B. S. Afr.* p. 345 (1867); *Blyth, Ibis*, 1867, p. 174 (India); ? *E. Newt. Ibis*, 1867, pp. 351, 369 (Seychelles); *Heugl. Reis. in d. Geb. d. Weiss. Nil*, p. 384 (1868); *Chapm. Trav. S. Afr.* ii. *App.* p. 420 (1868); *Jerd. Ibis*, 1869,

p. 231 (Delhi); *Hume, ibid.* p. 355; *G. R. Gr. Ibis*, 1869, pp. 440, 442, pl. xv. f. 8 (head); *Finsch u. Hartl. Vög. Ost-Afr.* p. 798 (1870); *Boc. Jorn. Acad. Sc. Lisb.* 1871, p. 277 (Mossamedes), *Anderss. B. Damara Land*, p. 333 (1872); *Hume, Str. Feath.* i. p. 31 (1872) (India); *Adam, ibid.* p. 400 (1873) (Sambhur Lake); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1272 (1873); *Reynaud, Tr. R. Soc. Maur.* viii. p. 4 (1873); *Adam, Str. Feath.* ii. p. 339 (1874) (Sambhur Lake); *Hume, Str. Feath.* iv. p. 25 (1876) (N. Guzerat, Sindh); *Bocage, J. f. O.* 1876, p. 295; *Butl. Str. Feath.* v. p. 234 (1872) (N. Guzerat); *Gieb. Thes. Orn.* iii. p. 109 (1877); *Rchnw. J. f. O.* 1877, p. 228 (part.); *Hume, Str. Feath.* viii. p. 114, n. 944 bis (1879); *Butl. Str. Feath.* ix. p. 436 (1880) (Deccan); *Legge, B. Ceylon*, p. 1093 (1880) (N.W. India); *Bocage, Orn. Ang.* p. 490 (1881); *Milne-Edw. & Grand. Ois. Madag.* p. 612, pls. 262, 263 (osteology) (1882); *Sharpe, Layard's B. S. Afr.* p. 745 (1884); *Fischer, Zeitschr. ges. Orn.* 1884, p. 393 (Massailand); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 233 (1884) (Shoa); *Fischer, J. f. O.* 1885, p. 118 (Lamu, Nguruman); *Hume, Str. Feath.* x. p. 513 (1887) (not breeding in India); *Matschie, J. f. O.* 1887, p. 146 (Morungu); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 318 (Shoa) (1888); *Tristr. Cat. Coll. B.* p. 52 (1889) (Cape, Natal); *Hartert, Kat. Vogelsamml.* p. 204 (1891) (Cape and Red Sea); *A. Newt. Dict. of B.* p. 257 (pt. 1, 1893).

Phœnicopterus parvus, *Vieill. Analyse*, p. 69 (1816) (Africa); *Steph. Gen. Zool.* xii. 1, p. 188 (1824); *Less. Man. d'Orn.* ii. p. 244 (1828); *G. R. Gr. List B. Brit. Mus.* iii. p. 125 (1844); *id. Gen. B.* iii. p. 603, n. 5 (1846); *Hartl. J. f. O.* 1854, p. 302 (Senegambia, Guinea, Damaraland); *Bp. Compt. Rend.* xl. p. 724, n. 145 (1855); *Kirk, Ibis*, 1864, p. 335 (Zambesi); *Schleg. Dierent.* p. 280, fig. in p. 279 (1864); *id. Mus. P.-B.* Anseres, p. 116 (1866); *Dub. Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 188 (1886) (Tanganyika).

Phœnicopterus capensis, *Smith, Descr. of New or imperf. known Objects of the An. Kingd. found in the South of Afr.* no. 4 (1st Nov. 1828).

Flamingo (nov. sp.), *Smith, Afr. Glen*, 13th ed. p. 25, no. 219 (Cape) (1836).

Flammant, *Sganzin, Notes sur les Mamm. et sur l'Orn. de Madag.* p. 47 (*Mém. Soc. Hist. Nat. de Strasb.* iii. 1840).

Phœnicopterus antiquorum, *Hartl.* (*nec Temm.*), *Zeitschr. f. Zool. u. Anat.* 1848, p. 159, n. 105 (Madagascar); *id. Ann. & Mag. N. H.* ii. p. 393 (1848) (Madagascar).

Smaller Indian Flamingo, *Blyth, Cat. B. Mus. A. S. B.* p. 299 (1849).

Phœnicopterus blythi, *Bp. Consp. Gen. Av.* ii. p. 146, n. 4 (?) (1855) (*ex Blyth*); *id. Compt. Rend.* xl. p. 274, n. 143 (1855), xliii. p. 992 (=roseus, *Pall.* ?) (1856); *Blyth, Ibis*, 1867, p. 174.

Phœnicopterus erythræus, *Hartl.* (*nec Verr.*) *J. f. O.* 1860, p. 173 (Madagascar); *id. Orn. Beitr. z. Faun. Madag.* p. 81 (1861); ? *id. J. f. O.* 1861, p. 272 (Danakil and Somali Coast); *J. Verr. in Maill. Notes, Annexe*, p. 3 (1863); *Pollen, N. T. D.* i. p. 326 (1863); *Coquer. Bull. Soc. Accl. de la Réun.* ii. p. 22 (1864); *Verr. in Vinson's Voy. à Madag., Ann. B*, p. 4 (1865); *Grand. Rev. et Mag. de Zool.* 1868, p. 5 (Madagascar); ? *Sperl. Ibis*, 1868, p. 292 (Mosambic flats); *Finsch u. Hartl. Vög. Ost-Afr.* p. 795 (part.) (1870); *Hartl. Vög. Madag.* p. 238 (1877); *Sibree, Ibis*, 1892, p. 117 (Madagascar).

Phœnicopterus, sp., *E. Newt. Ibis*, 1863, p. 459 (Madagascar); *Schleg. & Poll. Rech. Faun. Madag.* ii. p. 114 (1868).

Phœnicopterus roseus, part., *Jerd. B. of Ind.* iii. p. 775, n. 944 (1864) (India).

Phœnicopterus rubidus, *Feild. Ibis*, 1868, p. 496 (Secunderabad); *Jerd. Ibis*, 1869, p. 230 (=minor); *Hume, ibid.* p. 355 (=minor); *A. Newt. ibid.* (note, different from *minor*); *G. R. Gr. Ibis*, 1869, pp. 440, 442, pl. xiii. f. 3 (head); *Blanf. Ibis*, 1873, p. 220; *Gieb. Thes. Orn.* iii. p. 109 (1877); *Tristr. Cat. Coll. B.* p. 52 (1889); *A. Newt. Dict. of B.* p. 257 (pt. 1, 1893).

Phœnicopterus (Phœniconaias) minor, *G. R. Gr. Ibis*, 1869, p. 442; *id. Hand-list*, iii. p. 72, n. 10549 (1871).

Phœnicopterus (Phœniconaias) rubidus, *G. R. Gr. Ibis*, 1869, p. 442; *id. Hand-list*, iii. p. 72, n. 10548 (1871).

Adult male. General plumage pink; round the base of the bill the feathers are tinged with crimson; in very old birds the feathers of the back and breast have mesial crimson streaks; also some of the longer scapulars are crimson; median wing-coverts bright crimson, edged with pink-white; greater wing-coverts, primary-coverts, and marginal under wing-coverts rosy; axillaries crimson; quills and greater under wing-coverts black; under tail-coverts tinged with crimson towards the tip and edged with rosy; tail rosy, brighter on the outer web of the feathers: "iris red minium; bill dark lake-red [with the tip black]; feet red" (*Antinori*). Total length about 36 inches, wing 13·25, tail 5, culmen 4, tarsus 8·75–7·5.

Female. Similar to the male, but less bright, and without the crimson mesial stripes on the back, breast, and scapulars.

Young in moulting dress. Paler than the adults; general plumage pale rosy white; wing-coverts pink: "iris red or yellow; bill lake-red; feet rosy or coral-red" (*Antinori*).

Young in first plumage. Whitish, with a slight rosy tinge; neck greyish; wing-coverts whitish, more or less tinged with pale brown, especially the smaller ones, and the greater ones towards the tip, all with narrow mesial brown stripes; primary-coverts rosy white, brown at the tip; quills brown; tertials brown, edged with whitish; under wing-coverts whitish, tinged with brown; tail whitish, edged with brown on the outer web of the feathers: "iris reddish; bill dull lead-colour; feet plumbeous" (*Antinori*).

The brightest birds from India with mesial crimson stripes on the back and wings are dated *May*.

Hab. Southern Africa, north to Shoa and Abyssinia on the east, to Senegal (?) on the west; Madagascar; and North-western India.

a. Ad. st.	Africa.	J. Gould, Esq. [P.].
b. Ad. sk.	Lake Elmetaita, E. Africa, 5880 feet.	Dr. J. W. Gregory [P.].
c. Ad. sk.	Deccan (*H. W. Feilden*).	Tweeddale Coll. (Type of *Phœnicopterus rubidus*, Feild.)
d–e'. ♂ ♀ ad., imm., et juv. sk.	Sambhur Lake, Oct., Nov., Dec., Jan., May (*R. M. Adam*).	Hume Coll.

3. PHŒNICOPARRUS.

Type.

Phœnicoparrus, *Bp. Compt. Rend.* xliii. p. 992 (1856) .. P. andinus.
Lipocentrus, *Sundev. Meth. nat. Av. disp. Tent.* p. 145 (1872) ..... P. andinus.
Phœnicoparra, *Stejn. Stand. Nat. Hist.* iv. *Birds*, p. 154 (1885).

Range. Andes of Peru and Chili.

Key to the Species.

a. Larger: wing about 18 inches, culmen 4·6; under tail-coverts much longer than the tail; tertials black ..... *andinus*, p. 21.
b. Smaller: wing about 16·75 inches, culmen 3·4; tertials bright rosy ..... *jamesi*, p. 22.

1. Phœnicoparrus andinus.

Parrina of the Chilians, *Philippi, Anal. Univ. de Chile*, Aug. 1854, p. 337; *id. Wiegm. Arch.* 1855, i. p. 10.

Phœnicopterus andinus, *Philippi, Anal. Univ. de Chile*, Aug. 1854, p. 337; *id. Wiegm. Arch.* 1855, i. p. 12; *Cass. U.S. Astron. Exped.* ii. p. 198 (1856); *Philippi, Reise d. die Wüste Atacama*, p. 164, *Zool.* tt. iv., v. f. *a* (head) (1860); *id. Ibis*, 1861, p. 199; *Sclat. P. Z. S.* 1867, pp. 334, 339 (part.); *Phil. & Landb. Cat. Aves Chil.* n. 170 (*An. Univ. Chile*, 1868, p. 279); *Burm. P. Z. S.* 1872, p. 364 (E. valleys of Cordilleras); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 127, n. 4 (1873); *Leyb. Excurs. Pamp. Argent.* (*cf. J.f. O.* 1875, p. 444); *Rchnw. J. f. O.* 1877, p. 229 (part.); *Gieb. Thes. Orn.* iii. p. 108 (part.) (1877); *Philippi, Arch. f. Naturg.* xlv. 1, p. 160 (egg) (1879); *Sclat. P. Z. S.* 1886, p. 399, cut of the head, p. 400, f. 2; *Rahmer, J. f. O.* 1887, p. 160, tab. ii. f. 3 (head); *Philippi, Ornis*, iv. p. 160 (Antofagasta) (1888); *Cab. J. f. O.* 1889, p. 76; *Sclat. Argent. Orn.* ii. p. 119 (1889); *id. P. Z. S.* 1891, p. 136 (Tarapacá); *Frenz. J. f. O.* 1891, p. 125 (Cordoba); *Berk. James, New List Chil. B.* p. 9, n. 141 (1892); *A. Newt. Dict. of B.* p. 257 (pt. 1, 1893).

Phœnicoparrus andinus, *Bp. Compt. Rend.* xliii. p. 992 (1856); *G. R. Gr. Hand-list*, iii. p. 73, n. 10551 (1871); *Gigl. Viagg. Magenta*, p. 903 (1875).

Lipocentrus andinus, *Sundev. Meth. nat. Av. disp. Tent.* p. 145 (1872).

Phœnicoparra andinus, *Stejn. Stand. Nat. Hist.* iv. *Birds*, p. 154 (1885).

Adult male. Head and neck pink, whiter in front of the head; back white, tinged with pink; lower parts pale rosy, the feathers of the breast brighter, with the edges nearly white; wing-coverts bright pink, with the edges paler; quills, including tertials, black; axillaries bright pink; under tail-coverts bright rose-colour, much longer than the tail: "iris very dark brown; feet whitish yellow; beak, fore part black, hind part whitish yellow; between the nostrils brick-red; lowest hinder part of lower mandible and a small spot before the eyes violet" (*Rahmer*). Total length about 48 inches wing about 18, tail 7, culmen (in a straight line) 4·6, tarsus 10·8.

Female. Similar, but somewhat paler and smaller.

This is the largest of all the Flamingoes, and has the largest and strongest bill.

Hab. Andes of Chili and eastern valleys of the Cordilleras.

a. Ad. sk.	Chili.	
b. ♀ ad. sk.	Huasco, N. Chili, Feb. (*Rahmer*).	H. Berkeley James, Esq. [P.].
c–g. ♂ ♀ ad. sk.	N. Cancosa, Chili (Jan., April).	H. Berkeley James, Esq. [P.].

2. Phœnicoparrus jamesi.

Flamingoes with red breast, *Bollaert, Pr. Roy. Geogr. Soc. of London*, xxi. (28 April, 1851), p. 120 (Lake of Parinas); *Philippi, Wiegm. Arch.* 1855, i. p. 13.

Phœnicopterus andinus, part., *Sclat. P. Z. S.* 1867, p. 334 (Tarapacá); *G. R. Gr.* (*nec Phil.*) *Ibis*, 1869, pp. 441, 443, pl. xv. ff. 9, 10 (head of Bollaert's specimen *); *Rchnw. J. f. O.* 1877, p. 229 (part.); *Gieb. Thes. Orn.* iii. p. 108 (part.) (1877); ? *Tacz.* (*nec Phil.*) *Orn. Pér.* iii. p. 423 (Bollaert's specim.) (Parinacocha, Peruvian Andes) (1886).

Phœnicopterus jamesi, *Rahmer, in litt.*; *Sclat. P. Z. S.* 1886, p. 399, pl. xxxvi. and cut of head, f. 3 on p. 400 (Tarapacá); *Rahmer, J. f. O.* 1887, p. 160 †, tab. ii. f. 1 (head); *Cab. J. f. O.* 1889, p. 76; *Sclat. Argent. Orn.* ii. p. 117 (1889); *id. P. Z. S.* 1891, p. 132; *Berk. James, New List Chil. B.* p. 9, n. 142 (1892); *Sclat. Ibis*, 1893, p. 164.

Adult male. "White; head, upper part of the neck, and wings tinged with rosy; tip of the feathers of the nape, upper part of back and of the breast, scapulars, longer inner secondaries or tertials, and axillaries of a rose-blood colour; quills black; feet red; base of the bill yellow, apical portion black; naked lores flesh-colour; hind toe wanting. Total length about 36 inches, wing 16, tail 6·5, tarsus 8." (*Sclater.*) ‡

Male not in full dress. Pale rose-white, a little brighter on the wing-coverts, longer scapulars, and tertials; axillaries carmine-red; quills black; apical part of the bill black, basal part yellow, with the loral region, a narrow basal band, and the median part of the culmen, between the yellow and the black parts, carmine: "irides dark brown; legs and feet dark brick-red" (*Rahmer*). Total length about 34 inches, wing about 16·75, tail 6·5, culmen 3·4, tarsus 9.

Female. Similar, only somewhat smaller, tarsus 7·25.

Hab. Andes of Chili, near the Volcano of Isluga, in the Province of Tarapacá, and of Southern Peru.

a. Imm. st.	Parinacocha, Peruvian Andes.	W. Bollaert [P.].
b, c. ♂ ♀ imm. sk.	Sitani, Prov. of Tarapacá, Jan. (*Rahmer*).	H. Berkeley James, Esq.

* Gray expresses some doubts as to the specimen figured by him belonging to *Ph. andinus*.

† Herr Rahmer states that he has described this species in the Anal. Univ. de Chile for 1886, but I have not succeeded in seeing this publication.

‡ I have translated Sclater's latin description, not having been able to see the type, which is in the possession of Mrs. Berkeley James.

Suborder III. ANSERES.

The Anseres, like the Flamingoes, have uncinated processes on the ribs, a ventral bare tract, the anterior toes fully webbed, and the margins of the bill laminated; but are to be distinguished by the basipterygoid processes being placed as far forward as possible, and by the tarsus being about the length of the femur, reticulated behind and generally in front; the sternum has a pair of notches on the posterior margin, but in some of the *Fuligulinæ* and in the *Merginæ* the notches are converted into two complete fenestræ. The tongue is large, fleshy, with the margins toothed. The bill of the Anseres is generally broad and more or less flattened; in the *Merginæ* and some of the *Fuligulinæ* narrow and more or less tapering to a point; all have a distinct nail at the tip of the upper mandible. The males are furnished with a large spiral penis. They are monogamous. Their nest is a rough construction, variously situated; the eggs are numerous, creamy buff, or greenish white, or pure white. The young, as in all the *Chenomorphæ*, are covered with down when hatched, and able to run or swim at once.

Anseres are truly cosmopolitan birds.

One family only.

Family I. ANATIDÆ.

Key to the Subfamilies.

a. Hind toe not lobed.
  a'. Neck very long, as long as or even longer than the body ..... 1. *CYGNINÆ*, p. 24.
  b'. Neck moderate.
    b''. Feet semipalmated; hind toe very long, on the same level with the anterior ones ..... 2. *ANSERANATINÆ*, [p. 44.
    c''. Feet palmated.
      c'''. Hind toe rather long; tail-feathers rather long, broad, rounded at the tip; upper parts mostly glossy ..... 3. *PLECTROPTERINÆ*, [p. 45.

d'''. Hind toe moderate ;tail-feathers rather short; upper parts not glossy ; no metallic wing-speculum ; bill rather thick and high at base.

*d*⁴. Cere of the bill much developed ..... 4. *CEREOPSINÆ*, p. 79.

*e*⁴. No cere on the bill..... 5. *ANSERINÆ*, p. 81.

b. Hind toe very narrowly lobed ; usually with metallic colours or speculum on the wings; the larynx with a bulla ossea in males. [p. 128.

c'. Bill rather short and goose-like .... 6. *CHENONETTINÆ*,

d'. Bill rather flat and broad ..... 7. *ANATINÆ*, p. 142.

c. Hind toe broadly lobed.

e'. Bill more or less depressed.

e . Tail-feathers normal, not particularly stiff ..... [p. 326.
8. *FULIGULINÆ*,

f''. Tail-feathers narrow and very stiff ..... 9. *ERISMATURINÆ*.

f. Bill more or less compressed, never decidedly depressed. [p. 426.

g''. Tail rather long and stiff; no tooth-like serrations on the edges of the mandibles ..... [p. 454.
10. *MERGANETTINÆ*,

h''. Tail moderately long, not particularly stiff; lower mandible without trace of lamellæ along the sides, but with a series of distinct tooth-like serrations along the upper edge, as on the edges of the upper mandible ..... 11. *MERGINÆ*, p. 463.

Subfamily I. CYGNINÆ.

Key to the Genera.

a. Lores in the adult birds naked.

a'. Tertials and scapulars normally smooth ; predominant colour white ..... 1. CYGNUS, p. 25.

b'. Tertials and scapulars crisp ; predominant colour black ..... 2. CHENOPIS, p. 41.

b Lores feathered ..... 3. COSCOROBA, p. 42.

1. CYGNUS*.

Type.

Cygnus, *Bechst. Orn. Taschenb.* ii. p. 404 (note) (1803) ..... C. olor.
Olor, *Wagl. Isis*, 1832, p. 1234 ..... C. musicus.
Cycnus, *Temm. Man. d'Orn.* 2nd ed. iv. p. 526 (1840).
Sthenelus, *Stejneg. Pr. U.S. Nat. Mus.* v. p. 185 (1882) ..... C. melancoryphus.
Sthenelides, *Stejneg. Kingsl. Stand. Nat. Hist.* iv. p. 143 (1885) (=Sthenelus).

Range. Northern hemisphere and Neotropical region.

Key to the Species †.

a. No knob at the base of the culmen; the trachea entering the carina sterni, which is hollow.
  a'. Basal part of the bill and lores more or less yellow.
    a''. Nearly the basal half of the bill yellow.
      a'''. Black apical portion of the bill generally does not extend above the nostrils, and on the sides only reaches halfway to the gape: larger, culmen 4·20 inches ..... *musicus*, p. 26.
      b'''. Black apical portion of the bill extends much above the nostrils and backwards to the gape: smaller, culmen 3·80 inches ..... *bewicki*, p. 29.
    b''. The yellow colour of the bill confined to a spot before the eyes; culmen 3·82–4·20 inches ..... *columbianus*, p. 32.
  b'. No yellow colour at the base of the bill, which is entirely black and very large; culmen 4·34–4·70 inches ..... *buccinator*, p. 33.
b. Culmen with a prominent knob at the base; the trachea not entering the carina sterni, which is simple.
  c'. Plumage of the adults entirely white ..... *olor*, p. 35.
  d'. Head and neck black; rest of the plumage white ..... *melancoryphus*, p. 39.

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* The generic name *Cygnus* was used by Bartram ('Travels,' p. 294, 1791) for a species which was either *C. columbianus* or *C. buccinator*, both allied to *C. musicus*. But Bartram was not a binomialist!

† I have not been able to identify the following species, which must remain doubtful till a competent observer examines the type:—

CYGNUS DAVIDI.

Cygnus (Coscoroba) davidi, *Swinh. P. Z. S.* 1870, p. 430 (Tientsin).
Cygnus davidi, *Swinh. P. Z. S.* 1871, p. 416; *Elwes, P. Z. S.* 1873, p. 651; *David & Oust. Ois. Chine.* p. 494 (1877); *Sclat. P. Z. S.* 1880, p. 507.
Cygnus (Koscoroba) davidi, *David, N. Arch. Mus. Bull.* vii. *Cat.* n. 438 (1871).

1. Cygnus musicus.

Wild Swan, *Edw. Birds*, ii. pl. 150 (1743); *Ellis, Phil. Trans.* lvi. p. 215, t. x. ff. 1, 2 (trachea) (1766); *Davy, P. Z. S.* 1849, p. 28 (aorta).

Cygnus ferus, *Briss. Orn.* vi. p. 292, pl. xxviii. (1760); *Salerne, Orn. ou Tr. d. Ois.* p. 405 (1767); *Pall. Sv. Vetensk.-Akad. Handl.* xl. p. 27 (note) (1779) *.

Anas cygnus, part., *Linn. S. N.* i. p. 194, n. 1 (1766); *Gm. S. N.* i. 2, p. 501, n. 1 (1788); *Lath. Ind. Orn.* ii. p. 893, n. 1 (1790); *id. Tr. Linn. Soc.* iv. p. 105, tab. xiii. ff. 1, 2 (trachea and sternum) (1790); *Temm. Man. d'Orn.* ii. p. 828 (1820).

Anas cygnus *a*, *Linn. l. c.* (1766).

Cigno salvatico, *Gerini, Stor. degli Ucc.* v. t. 554 (1776).

Cygne sauvage, *Buff. Hist. Nat. Ois.* ix. p. 20 (1783).

Whistling Swan, *Lath. Gen. Syn.* iii. 2, p. 433 (1785); *Cooke, Letter on the Wild Swan*, pp. 1–11, pls. 1, 2 (1823).

Anas cygnus (ferus), *Lath. Syn. Suppl.* i. p. 297 (1787).

Anser cygnus, part., *Bonn. Enc. Méth.* i. p. 107, n. 1 (1790).

Cycnus canorus, *Humboldt, Rec. d'Observ. de Zool. et d'Anat. Comp.* p. 5 (1805) (nomen nudum).

Cygnus musicus, *Bechst. Gemeinn. Naturg. Vög. Deutschl.* iii. p. 830, t. 35 (1809); *Brehm, Isis*, 1830, p. 996; *id. Handb. Vög. Deutschl.* p. 831 (1831); *Bp. Comp. List*, p. 55, n. 394 (1838); *Rüpp. Mus. Senckenb.* iii. p. 6 (1839); *K. & B. Wirbelth. Eur.* pp. lxxxii, 222 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 413 (1842); *Macgill. Man.* ii. p. 158 (1842); *Schleg. Rev. Crit.* p. cxii (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 125 (1850); *Midd. Sibir. Reis.* ii. 2, p. 224 (1853) (Taimyr R., Boganida, Schantar Isl.); *Wallengr. Naumannia*, 1854, p. 266 (Scandinavia); *Licht. Nomencl. Av.* p. 101 (1854); *Brehm, Naumannia*, 1855, p. 296 (1855); *Heugl. Syst. Ueb.* p. 65 (1856); *Schrenck, Vög. d. Amurl.* p. 455 (1860); *Powys, Ibis*, 1860, p. 351 (Ionian Isl.); ? *Simpson, Ibis*, 1861, p. 366 (Dobrudscha); *Swinh. Ibis*, 1862, p. 254; ? *Blakist. Ibis*, 1862, p. 332; *Swinh. P. Z. S.* 1863, p. 323; *Radde, Reis. S. O.-Sib.* ii. p. 348 (1863); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); ? *A. Newt. Ibis*, 1865, p. 515 (Spitsbergen); *Schleg. Mus. P.-B.*, Anseres, p. 81 (1866); *Dyb. & Parr. J. f. O.* 1868, p. 338; *Przew. Putesch. Ussur.* n. 189 (1870); *David, N. Arch. Mus., Bull.* vii. *Cat.* n. 436 (1871); *Swinh.*

Coscoroba davidi, *G. R. Gr. Hand-list*, iii. p. 79, n. 10607 (1871); *Gieb. Thes. Orn.* i. p. 856 (1872); *Stejn. Pr. U.S. Nat. Mus.* v. p. 180 (note) (1882).

"Smaller than *C. bewicki*, with the neck about a third shorter; is entirely white, with the bill vermilion colour having a black dertrum, and the legs and feet orange-yellow. Its nearest ally is *C. coscoroba* of Chili, but it is larger than that, and has the wing white throughout." (*Swinhoe.*)

Only known from a specimen bought in the flesh in the market at Tientsin, and preserved in the Museum of the Lazarist Mission in Peking.

* Contrary to Mr. Stejneger's statement (Pr. U.S. Nat. Mus. v. p. 189), it appears to me that Pallas (*l. c.*) did not use the specific binomial name *Anas olor* for the present species; he only wrote the substantive names *Olor* and *Cygnus* for the two species of Swans.

P. Z. S. 1871, p. 416 (Shanghai); *Saund. Ibis*, 1871, p. 396 (S. Spain); *Nathus. J. f. O.* 1871, p. 255 (egg); *Heugl. Ibis*, 1872, p. 63 (Novaja Semlia); *Shell. B. Egypt*, p. 279 (1872); *Brooke, Ibis*, 1873, p. 342 (Sardinia); *Severtz. Turk. Jevotn.* p. 70 (1873); *Dyb. J. f. O.* 1873, p. 108, 1874, p. 336; *Danf. & Harvie-Brown, Ibis*, 1875, p. 426 (Transylvania); *Swinh. Ibis*, 1875, p. 456 (Hakodadi); *Gigl. Viagg. Magenta*, p. 602 (Wusung) (1875); *Dress. Ibis*, 1876, p. 416; *Seebh. & Harvie-Brown, ibid.* p. 437 (Lower Petchora); *Finsch, Ibis*, 1877, p. 59; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 44 (1877); *id. Orn. Faun. Vost. Sibir.* p. 68 (1877); *Prjev. Rowl. Orn. Misc.* iii. p. 98 (Mongolia) (1878); *Blakist. & Pryer, Ibis*, 1878, p. 211; *Seebh. Ibis*, 1879, p. 157 (Siberia); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 255; *Dress. B. Eur.* vi. p. 433, pl. 419. f. 4 (head) (1880); *Sclat. P. Z. S.* 1880, p. 506; *Hume & Marsh. Game-B.* iii. p. 4 (India?) (1880); *Blak. & Pryer, Tr. As. Soc. Jap.* viii. p. 182 (1880), x. 1, p. 94 (1882); *Gigl. Ibis*, 1881, p. 213; *Seebh. Ibis*, 1882, p. 227 (Astrakan) p. 385 (Archangel); *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. zool. Gärt.* p. 70 (1882); *Coues, Check-list*, 2nd ed. p. 111, n. 690 (1882); *Blakist. Chrysanth.* 1883, p. 26; *Seebohm, Ibis*, 1883, p. 33 (Caucasus); *B. O. U. List Br. B.* p. 120 (1883); *Sclat. List Vert. An.* 8th ed. p. 423 (1883); *Tacz. Bull. Soc. Zool. Fr.* 1883, p. 343; *Radde, Orn. Caucas.* p. 447 (1884); *Blakist. Amend. List B. Jap.* pp. 8, 23 (1844); *Tristr. Faun. & Flor. Palest.* p. 114 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 308 (1884–85); *Seebh. Hist. Br. B.* iii. p. 408, pl. 57 (egg) (1885); *Clarke & Backh. Ibis*, 1885, p. 371 (Iceland); *Sundev. Ibis*, 1886, p. 408 (osteol.); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; *Harting, Zoolog.* 1887, p. 255 (Iceland); *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Tristr. Cat. Coll. B.* p. 51 (1889); *Seebh. B. Jap. Emp.* p. 234 (1890); *Rchnw. J. f. O.* 1890, p. 80; ? *Lydekk. Cat. Foss. B.* p. 107 (1891); *Styan, Ibis*, 1891, pp. 328, 494; *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. p. 294 (1891); *Seebh. Ibis*, 1892, p. 26 (Heligoland); *Campbell, ibid.* p. 245 (Corea).

Cygnus melanorhynchus, *Meyer, Taschenb. deutsch. Vogelk.* ii. p. 498, with pl. (1810); *Dum. Dict. Sc. Nat.* xii. p. 310 (1818); *Naum. Wiegm. Arch.* 1837, i. p. 104 (Hungary).

Cygnus ferus, *Leach, Syst. Cat. M. & B. Br. Mus.* p. 37 (1816) (*nec Bartram*, 1791); *Vieill. N. D.* ix. p. 39 (1817); *Steph. Gen. Zool.* xii. 2, p. 10 (1824); *Flem. Br. Anim.* p. 126 (1828); *Yarr. Tr. Linn. Soc.* xvi. 2, p. 453 (1830); *Less. Tr. d'Orn.* p. 629 (1831); *Benn. Gard. & Menag. Zool. Soc., Birds*, p. 171 (1831); *Ménétr. Cat. Rais. Cauc.* p. 56, n. 192 (Bakou) (1832); *Gould, B. Eur.* pl. 355 (1837); *Less. Compl. de Buff., Ois.* ix. p. 527 (1837); *id. op. cit.* 2nd ed. p. 718 (1838); *Blainv. Compt. Rend.* vii. p. 1024 (1838); *Naum. Wiegm. Arch.* 1838, i. pp. 361, 366, Taf. viii. f. 1 (*a*, *b*, *c*, *d*); *Eyton, Mon. Anat.* p. 101, pl. 6 (skeleton and trachea) (1838); *Less. Rev. Zool.* 1839, p. 322; *G. R. Gr. Gen. B.* iii. p. 610, n. 4 (1844); *Rchnb. Syn. Av.*, Natatores, t. 105. ff. 961–62 (1845); *id. Av. Syst. Nat.* p. 10 (1852); *Reinh. Ibis*, 1861, p. 13 (Greenland); *Sclat. P. Z. S.* 1862, p. 376 (Zool. Gard.); *G. R. Gr. Cat. Brit. B.* p. 188 (1863); *More, Ibis*, 1865, p. 441 (Great Britain); *Parker, P. Z. S.* 1865, p. 752; *Degl. & Gerbe, Orn. Eur.* ii. p. 473 (1867); *Tristr. Ibis*, 1868, p. 327 (Palestine); *Eyton, Syn. Anat.* p. 50 (1869); *Elwes & Buckl. Ibis*, 1870, p. 338 (Turkey);

Gould, B. Gr. Brit. v. pl. 9 (pt. xxi. 1872); *Gieb. Thes. Orn.* i. p. 856 (1872); *Wright, Ibis*, 1874, p. 240; *David & Oust. Ois. Chine*, p. 493 (1877); *Hume, Str. Feath.* vii. pp. 106, 107, 464 (1878–79), viii. p. 114, n. 944 quat. (1879); *Forbes, P. Z. S.* 1882, p. 352.

Cygnus olor, *Pall.* (*nec Gm.*) *Zoogr. Rosso-As.* ii. p. 211 (1811).

Cygnus olor *a*, *Pall. op. cit.* p. 211.

Cygnus cygnus, *Less. Man. d'Orn.* ii. p. 407 (1828); *Lazarini, Orn. Jahrb.* ii. pp. 231–233 (Tyrol) (1891); *Hartert, J. f. O.* 1891, p. 306; *id. Kat. Vogelsamml.* p. 226 (1891).

? Cygnus islandicus, *Brehm, Isis*, 1830, p. 996 (*nec* 1125?); ? *id. Handb. Vög. Deutschl.* pp. 832, 1035, pl. xli. f. 1 (1831).

Olor musicus, *Wagl. Isis*, 1832, p. 1234; *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844); *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Cygnus xanthorhinus, *Naum. Vög. Deutschl.* xi. p. 478, t. 296 (1842).

Olor cygnus, *G. R. Gr. List Gen. & Subgen. B.* p. 122 (1855); *Ep. Compt. Rend.* xliii. p. 648, n. 3 (1856); *G. R. Gr. Hand-list*, iii. p. 78, n. 10600 (1871); *Ridgw. Pr. U.S. Nat. Mus.* iii. pp. 202, 222 (1880); *id. Nom. N. Am. B.* n. 586 (1881); *Stejn. Pr. U.S. Nat. Mus.* v. p. 198 (1882); *B., B., & R. Water-B. N. Am.* i. p. 423 (1884); ? *Stejn. Bull. U.S. Nat. Mus.* n. 29, p. 149 (Commander Isl.) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 136 (Commander Isl.) (1887).

Cygnus linnæi, *Malm, Göteb. och Bohusl. Faun.* pp. 99, 343 (1877).

Olor musicus, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* fasc. v. p. 3 (1886).

Hybrids.

Cigne chanteur ♂ × Oie domestique ♀, *F. Cuv. Ann. Mus. Hist. Nat.* xii. p. 119 (1808).

Cygnus musicus ♂ × Anser domesticus ♀, *Leverk. J. f. O.* 1890, p. 217.

Cygnus musicus ♂ × Anser cinereus ♀, *Leverk. ibid.*

Adult. Head, neck, the whole plumage of the body and wings pure white; some specimens, occasionally only, exhibiting a rufous ochreous tint at the tips of the feathers of the head; anterior part of the beak depressed and black, the basal part, with the lores, yellow, this colour extending forward along each lateral margin of the upper mandible, beyond the openings of the nostrils, which are black; the black colour only reaches halfway to the gape; legs, toes, and their membranes black. Total length about 5 feet, wing 25·5 inches, tail 8·5, culmen 4·2, tarsus 4·2.

Young. General colour greyish brown; beak first of a dull flesh-colour, the tip and the lateral margins black, later black, with a reddish-orange band across the nostrils, and with the base and lores pale greenish white.

Young in down. White.

Hab. Arctic Europe and Asia, whence it migrates to Southern Europe, to Turkestan, China, and Japan; resident in Iceland; occasionally strays to Greenland.

a. Juv st.	Europe.	Purchased.
b, *c*. Ad. st.	Hayling Island.	J. B. Tyndale, Esq. [P.].
d. Ad. st.	Wiltshire.	Montagu Coll.
e, *f*. Ad. [heads].	Pagham Harbour, Sussex.	J. E. Harting, Esq. [P.].
g. Pull. st.	No locality.	Gould Coll.
h. Pull. st.	No locality.	
i. Ad. sk.	Corea.	F. Campbell, Esq. [P.].
k. Juv. sk.	Shanghai, Nov. (*R. Swinhoe*).	Seebohm Coll.
l. Ad. [head and legs].	S. Yezo, Japan, Feb.	Seebohm Coll.
m. Juv. [head].		Seebohm Coll.
n. Pull. sk.	Bred in confinement.	
o. Skeleton.		
p–*u*. Skulls.		
v. Sternum with trachea.		
w, *x*, *y*. Sterna.		Yarrell Coll.
z. Sternum.		
a'. Sternum.		

2. Cygnus bewicki.

Cygnus olor β*, *Pall. Zoogr. Rosso-As.* ii. p. 214 (1811).

Cygnus bewickii, *Yarr. Tr. Linn. Soc.* xvi. 2, p. 453 (1830); *Blackwall, Zool. Journ.* v. p. 189 (1830); [*Anonymous*], *ibid.* p. 191 (1830); *Selby, Tr. N. H. Soc. Northumb.* i. pp. 17–25 (1831); *Less. Tr. d'Orn.* p. 629 (1831); *Selby, Ill. of Orn.* ii. p. 284, pl. xlvii. bis (1833); *Temm. Man. d'Orn.* iv. p. 527 (1835); *Boie, Isis*, 1835, p. 262 (Dunkerque); *Eyt. Hist. R. Brit. B.* p. 86 (1836); *Thomps. Mag. of Zool. & Bot.* i. p. 462 (1837); *Gould, B. Eur.* pl. 356 (pt. xix. 1837); *Less. Compl. de Buff., Ois.* ix. p. 528 (1837); *id. op. cit.* 2nd ed. p. 218 (1838); *Baill. Compt. Rend.* vii. p. 1021 (1838); *Blainv. ibid.* p. 1025; *Bp. Comp. List*, p. 55, n. 395 (1838); *Eyt. Mon. Anat.* p. 98, pl. 18 (trachea and sternum) (1838); *Wiegm. Arch. Naturg.* 1838, i. p. 367, Taf. ix. (1838); *Less. Rev. Zool.* 1839, p. 222; *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Gerbe, Rev. Zool.* 1845, p. 244; ? *Midd. Sib. Reise*, ii. 2, p. 224 (Taimyr) (1853); *Altum, Naumannia*, 1855, p. 101; ? *Schrenck, Vög. Amurl.* i. 2, p. 456 (1860); ? *Radde, Reise S.O.-Sibir.* ii. p. 349 (Dauria) (1863); ? *Parker, P. Z. S.* 1865, p. 752 (Malta, fossil); *Murie, P. Z. S.* 1867, p. 13; *Swinh. Ibis*, 1867, p. 398; *Dyb. & Parr. J. f. O.* 1868, p. 338; *Fritsch, Vög. Eur.* p. 339, Taf. 46. f. 9 (1870); *Heugl. Ibis*, 1872, p. 63 (Nechwatowa); *Swinh. Ibis*, 1873, p. 368 (China); *Seebh. P. Z. S.* 1875, p. 566 (egg); *Seebh. & Harvie-Brown, Ibis*, 1876, p. 438 (Lower Petchora); *Seebh. P. Z. S.* 1877, p. 866; *Prjev. Rowl. Orn. Misc.* iii. p. 19 (Mongolia) (1878); *Blakist. & Pryer, Ibis*, 1878, p. 212 (Japan); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 255 (W. Siberia); *Hume, Str. Feath.* vii. pp. 107, 464 (1878–79), viii. p. 114, no. 944 quint. (1879); *Dress. B. Eur.* vi. p. 441, pl. 419. f. 3 (head) (1880); *Sclat. P. Z. S.* 1880, p. 507; *Hume & Marsh. Game-B.* iii. p. 51,

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* Authors generally add *minor*, but in Pallas's work the word *minor* is the commencement of his description, and not part of the specific name.

pl. 6 (1839); *Nordensk. Voy. of the Vega* (*cf. Ibis*, 1882, p. 338); *Coues, Check-list*, 2nd ed. p. 111, n. 691 (1882); *Forbes, P. Z. S.* 1882, p. 352; *B. O. U. List Br. B.* p. 121 (1883); *Sclat. List Vert. An.* 8th ed. p. 423 (1883); *Bunge, Mél. Biol.* 1884, p. 45 (Lena Delta); *Blakist. Amend. List B. Jap.* p. 33 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 315 (1884–85); *Seebh. Hist. Br. B.* iii. p. 484, pl. 58 (egg) (1885); *Salvad. El. Ucc. Ital.* p. 255, no. 356 (1886); *Gigl. & Salvad. P. Z. S.* 1887, pp. 589, 591, pl. lii. f. 2 (head); *iid. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 140 (1888); *Pleske, Rev. Turkest. Ornis*, p. 54 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889); *Seebh. B. Jap. Emp.* p. 235 (1890); *Rchnw. J. f. O.* 1890, p. 80; ? *Lydekk. Cat. Foss. B.* p. 108 (1891); *Hartert, Kat. Vogelsamml.* p. 226 (1891) (Abbeville); *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. p. 295 (1891); *Seebh. Ibis*, 1892, p. 26 (Heligoland).

Cygnus islandicus, *Brehm, Isis*, 1830, p. 1125 (nec p. 996 ?) (Münchausen); *Naum. Wiegm. Arch.* iv. p. 364, Taf. viii. f. 2 *e, f, g, h* (1838); *Brehm, Naumannia*, 1855, p. 296; *C. F. Dubois, Pl. Col. Ois. Belg.* iii. p. & pl. 298 (1860).

Swan (new sp.), *Wingate, Trans. N. H. Soc. Northumb.* i. pp. 1, 2 (1831, read Oct. 20, 1829).

Olor bewickii, *Wagl. Isis*, 1832, p. 1234; *Stejn. Pr. U.S. Nat. Mus.* v. p. 201 (1882); *B., B., & R. Water-B. N. Am.* i. p. 423 (1884).

Cygnus berwickii (*err.*), *Eyton, Mon. Anat.* pl. 18 (trachea and sternum) (1838).

Cygnus minor, *K. & B. Wirbelth. Eur.* pp. lxxxii, 222 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 414 (1842); *G. R. Gr. Gen. B.* iii. p. 610, n. 5 (1844); *Rchnb. Syn. Av.*, Natatores, t. 106. ff. 963–64 (1845); *Schleg. Naumannia*, 1855, p. 258, Taf. iv. ff. 2–4 (heads); *Altum, ibid.* (note), Taf. iv. ff. 5, 6 (heads); *Baedek. Eier eur. Vög.* t. 31 (1855); *Swinh. Zoolog.* 1860, p. 6924; *id. Ibis*, 1861, p. 344 (China), 1862, p. 254; *id. P. Z. S.* 1863, p. 323 (Canton); ? *A. Newt. Ibis*, 1865, p. 515 (Spitsbergen); *Schleg. Mus. P.-B.* Anseres, p. 82 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 474, (1867); *Swinh. Ibis*, 1867, p. 398; *David, N. Arch. Mus., Bull.* vii. *Cat.* n. 437 (1871); *Swinh. P. Z. S.* 1871, p. 416; *Rey, Synon. d. eur. Vög.* p. 122 (1872); *Gieb. Thes. Orn.* ii. p. 855 (1872); *Gould, B. Gr. Brit.* v. pl. 10 (pt. xxi., 1872); *Dyb. J. f. O.* 1873, p. 108, 1874, p. 336; *Seebh. P. Z. S.* 1875, p. 566 (egg); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 44 (1877); *David & Oust. Ois. Chine*, p. 494 (1877); *Seebh. Ibis*, 1879, p. 158 (Siberia); *Gigl. Ibis*, 1881, p. 213 (Italy); *id. Icon. Avif. Ital.* fasc. xi. t. 339 (1881); *Seebh. Ibis*, 1882, p. 227 (Astrakan), p. 385 (Archangel); *Rogeron, Bull. Soc. Accl.* (3) x. pp. 220–230 (1883); *Styan, Ibis*, 1891, pp. 328, 494; *Dub. Faun. Belg., Ois.* ii. p. 414, pl. 250 (1892); *Rickett, Ibis*, 1894, p. 224 (China).

Cygnus melanorhinus, *Naum. Vög. Deutschl.* xi. p. 497, t. 297 (1842); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 298 (1860); *Jäckel, J. f. O.* 1861, pp. 66–71; *Westhoff. J. f. O.* 1890, p. 212.

Cygnus musicus minor, *Schleg. Rev. Crit.* p. cxii (1844).

Olor minor, *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844); *Bp. Compt. Rend.* xliii. p. 648, n. 4 (1856); *id. Cat. Parz.* p. 15 (1856); *G. R. Gr. Hand-list*, iii. p. 78, no. 10601 (1871); ? *Ridgw. Pr. U.S. Nat. Mus.* iii. pp. 202, 222 (1880).

Cygnus ferus, *G. R. Gr.* (*nec Leach*) *Cat. Hodgs. Coll. B. M.* p. 144 (Nepal) (1846); *id. op. cit.* 2nd ed. p. 76 (1863); *Brooks, J. A. S. B.* 1872, p. 64; *Blanf. Str. Feath.* vii. p. 99 (1878); *Hume, ibid.* p. 464 (=bewickii) (1879).
Cygnus musicus, *Kjaerb.* (*nec Bechst.*) *Orn. Dan.* pl. xliv. (1851).
Cygnus sp., *Altum, Naumannia*, 1854, pp. 145–149, Taf. i. & ii.
Cygnus americanus, *Hartl.* (*nec Sharpl.*) *Naumannia*, 1854, p. 327.
Cygnus altumi, *Baedeker, fide Bp. Compt. Rend.* xliii. p. 648 (1856); *Severtz. Turkest. Jevotn.* p. 70 (1873); *id. J. f. O.* 1875, p. 184, n. 358; *Dress. Ibis*, 1876, p. 416; *Hume, Str. Feath.* vii. p. 105 (1878); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22.
Holor minor, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* fasc. v. p. 15 (1885).
Cygnus davidi, *Gigl. & Salvad.* (*nec Swinh.*) *P. Z. S.* 1887, p. 589, pl. lii. f. 1 (Possiette Bay); *iid. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 117 (1888).

Adult. Similar to *C. musicus*, but smaller; tail-feathers normally 20; lores and basal portion of the beak deep yellow, but this colour not extending below the nostrils, remainder of the bill black, the black reaching on the edges to the gape and sometimes extending along the culmen; legs and feet dull black; irides hazel. Total length 3 feet 10 inches to 4 feet 2 inches, wing about 21 inches; culmen 3·8, tarsus 4·8.

Young in first winter. Greyish brown.

Young in second winter. White, the head and breast strongly marked with rusty; base of the beak lemon-yellow.

Hab. Arctic Siberia, whence it migrates to the Caspian, South Siberia, Mongolia, China, and Japan; occasionally wanders to Central and Western Europe, more frequently visits Great Britain. It is not known to occur in Iceland.

a. Ad. sk.	Gt. Britain.	Yarrell Coll. (Type of the species.)
b. Ad. st.	Gt. Britain.	
c. Ad. st.	Gt. Britain.	A. D. Bartlett, Esq. [C.].
d. Ad. [head and legs].	Whittlesea.	Salvin-Godman Coll.
e. ♀ ad. [head].	Strangford Lough, Belfast.	J. E. Harting, Esq. [P.].
f. Ad. [head and legs].	Petchora.	Seebohm Coll.
g. Ad. sk.	Ningpo, China, Dec. (*R. Swinhoe*).	Seebohm Coll.
h. Ad. st.	Amoy, China.	Purchased.
i. ♂ juv. sk.	Possiette Bay (Voy. of H.It.M. Ship 'Vettor Pisani').	Prof. Giglioli [P.].*
k. Ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.

* *Cygnus davidi*, Gigl. & Salvad. P. Z. S. 1887, p. 589, pl. lii. f. 1.

l. Skeleton.		
m. Skull and feet.	Nepal.	B. H. Hodgson, Esq. [P.].

3. Cygnus columbianus.

? Cygnus ferus, *Bartr.* (*nec Briss.*) *Trav.* p. 294 (1791) (may be *C. buccinator*).

Whistling Swan, *P. Allen, Hist. of the Expedit. under the command of Capt. Lewis and Clarke*, i. p. 398, ii. p. 192 (1814) *.

Anas columbianus, *Ord, Guthrie's Geogr.* 2nd Am. ed. p. 319 (1815).

Anas cygnus, *Bp.* (*nec Linn.*) *Obs. Nomencl. Wils.* p. — (1826); *id. Specch. Comp.* p. 70, n. 237 (1827).

Cygnus musicus, *Bp.* (*nec Bechst.*) *l. c.*; *id. Syn.* p. 379 (1828); *Linsl. Am. Journ.* xliv. p. 268 (1843).

Cygnus bewickii, *Sw. & Rich.* (*nec Yarr.*) *Faun. B.-Am.* ii. p. 465 (1831); *Nutt. Man.* ii. p. 372 (1834).

Cygnus ferus, *Sharpless* (*nec Leach*), *Doughty's Cab. Nat. Hist.* i. no. 8, p. 181 (1831); *Nutt. Man.* ii. p. 366 (1834).

[Anas ?] americana, *Sharpl. op. cit.* p. 185, pl. 16 (1831).

Cygnus americanus, *Sharpl. Am. Journ. Sc. Art*, xxii. p. 83 (1832); *Bp. Suppl. Specch. Comp.* p. 11, n. 237 (1832); *Macgill. Man. Orn.* ii. p. 157 (1842) (Scotland); *Bp. Comp. List*, p. 55, n. 364 (1838); *Eyt. Mon. Anat.* p. 99 (1838); *Aud. Orn. Biogr.* v. p. 133, pl. 411 (1839); *id. Syn.* p. 274 (1839); *id. B. Am.* vi. p. 226, pl. 384 (1843); *Gir. B. Long Isl.* p. 298 (1844); *G. R. Gr. Gen. B.* iii. p. 610, n. 6 (1844); *Rchnb. Syn. Av.*, Natatores, *Novitiæ*, t. 104. f. 2774 (1850) (*ex Audubon*); *Newb. P. R. R. Rep.* vi. p. 100 (1857); *Baird, B. N. Am.* p. 758 (1858); *id. Cat. N. Am. B.* n. 561 *a* (1859); ? *Barnston, Ibis*, 1860, p. 253 (Hudson's Bay); *Coop. & Suckl. N. H. Wash. Terr.* p. 248 (1860); *Wheat. Ohio Agr. Rep.* no. 223 (1860); *Coues & Prent. Smiths. Rep.* p. 477 (1861); *Ross, Canad. Natural.* vii. p. 151 (Mackenzie River) (1862); *id. Nat. Hist. Rev.* (2) ii. p. 286 (1862); *Blakist. Ibis*, 1863, p. 135; *Coues, Pr. Ac. Philad.* 1866, p. 98 (Colorado River); *McIlwr. Pr. Ess. Inst.* v. p. 94 (1866) (W. Canada); *Lawr. Ann. Lyc. N. Y.* viii. p. 295 (1866); *Schleg. Mus. P.-B.*, Anseres, p. 82 (1866); *Baird, Ibis*, 1867, p. 285 (England ?); *Brown, Ibis*, 1868, p. 425 (Vancouver Isl.); *Coues, Pr. Ess. Inst.* v. p. 297 (1868) (New England); *id. Pr. Bost. Soc.* xii. p. 124 (1868) (S. Carolina in winter); *Turnb. B. E. Pa.* 1869, p. 34 (Chesapeake Bay); *Dall & Bann. Tr. Chic. Ac.* i. p. 293 (1869) (Yukon); *Eyt. Syn. Anat.* p. 47 (1869); *Mayn. Guide*, p. 146 (1870) (Massachusetts); *Gieb. Thes. Orn.* i. p. 855 (1872); *Coues, Key*, p. 281, f. 182 (1872); *id. Check-list*, no. 477 (1873); *Snow, B. Kans.* p. 11 (1873); *Ridgw. Ann. Lyc. N. Y.* x. p. 388 (1874) (Illinois); *Coues, Birds N.-West*, p. 545 (1874); *Parker, Zoolog.* 1880, p. 111 (Scotland); *Sclat. P. Z. S.* 1880, p. 506; *Forbes, P. Z. S.* 1882, p. 352; *B. O. U. List Br B.* p. 120 (1883); *Saund., Yarrell's Hist. Br. B.* iv. p. 322 (1884–85).

Olor americanus, *G. R. Gr. List B. Brit. Mus.* iii. p. 131 (1844);

* In the quarto edition of the same work, p. 482 (1814), two Swans are mentioned, differing only in size and in note: the smaller "is about one fourth less, and its note is entirely different."

Bp. Compt. Rend. xliii. p. 648, n. 5 (1856); *G. R. Gr. Hand-list*, iii. p. 78, n. 10602 (1871); *Ridgw. Nom. N. Am. B.* n. 588 (1881); *Nels. Cruise 'Corwin,'* p. 92 (1881); *Murd. Exp. to Point Barrow*, p. 116 (1885).

Cygnus columbianus, *Coues, Bull. U.S. Geol. & Geogr. Surv. Terr.* 2nd ser. n. 6, p. 444 (1876); *id. Check-list*, 2nd ed. p. 110, n. 689 (1882); *id. Key N. Am. B.* p. 682, n. 689 (1884).

Olor columbianus, *Stejn. Pr. U.S. Nat. Mus.* v. p. 210 (1882); *B., B., & R. Water-Birds N. Am.* i. p. 425 (1884); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 150 (Bering I.) (1885); *A. O. U. Code of Nom. and Check-list*, p. 129, n. 180 (1886); *Turner, Contr. N. H. Alaska*, p. 144 (1886) (Yukon); *Nels. N. H. Coll. in Alaska*, p. 91 (1887) (Bering Sea); *Ridgw. Man. N. Am. B.* p. 120, pl. xxix. f. 1 (head) (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Bering Is.) (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 425 (eggs) (1891); *Hatch, B. of Minnes.* p. 82 (1892).

Tail usually of twenty feathers; bill not longer than the head.

Adult. Entire plumage pure white, the head, sometimes the neck, or even entire underparts, tinged with rusty; bill, tarsi, and feet deep black, the bare loral skin usually marked by an oblong spot of orange or yellow (dull pale reddish, yellowish, or whitish in the skin); iris brown. Total length about 53–55 inches, wing 21·50–22, tail 7–8, culmen 3·82–4·2, tarsus 4·06–4·32.

Female similar.

Young. Light plumbeous, paler beneath, the fore part and top of the head tinged with reddish brown; bill reddish flesh-colour, dusky at the tip; feet dull yellowish flesh-colour or greyish.

Hab. The whole of North America, breeding far north; accidental in Scotland.

a. Ad. st.	N. America.	J. Richardson, Esq. [P.].
b. Ad. st.	Northern Exped.	The Admiralty [P.].
c. ♂ ad. sk.	Corpus Christi, Texas, Oct. (*F. B. Armstrong*).	Salvin-Godman Coll.

4. Cygnus buccinator.

Cygnus buccinator, *Rich. Faun. B.-A.* ii. p. 464 (1831) (Hudson's Bay); *Yarrell, Philos. Mag.* 1832, p. 287; *id. Tr. Linn. Soc.* xvii. pp. 1–4, pl. i. (1834) (sternum and trachea); *Nutt. Man.* ii. p. 370 (1834); *Aud. Orn. Biogr.* iv. p. 536, pl. 376 (1838); *Bp. Comp. List*, p. 55, n. 365 (1838); *Wiegm. Arch. f. Naturg.* 1838, i. p. 371; *Eyt. Mon. Anat.* p. 100 (1838); *Blainv. Compt. Rend.* vii. p. 1026 (1838); *Less. Rev. Zool.* 1839, p. 323; *Aud. Orn. Biogr.* v. p. 114, pl. 406 (1839); *id. Syn.* p. 274 (1839); *Rüpp. Mus. Senckenb.* iii. p. 6 (1839); *Aud. B. Am.* vi. p. 219, pls. 382, 383 (1843); *Wyman, Pr. Bost. Soc. N. H.* i. p. 119 (sternum) (1843); *Giraud, B. of Long Isl.* p. 299 (1844); *G. R. Gr. Gen. B.* iii. p. 610, n. 7 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Rchnb. Syn. Av.*, Natatores, t. 104. ff. 2775–76 (1850) (*ex Aud.*); *Newb. P. R. R. Rep.* vi. p. 104 (1857) (California and Oregon); *Baird, B. N. Am.* p. 758 (1858); *id. Cat. N. Am. B.* n. 562 (1859); *Wied, J. f. O.* 1859, p. 162; ? *Barnst. Ibis*, 1860, p. 253 (Hudson's Bay); *Coop.*

& Suckl. N. H. Wash. Terr. p. 248 (1860); *Wheat. Ohio Agric. Rep.* no. 234 (1860) (Lake Erie); *Hayd. Rep.* p. 175 (1862) (Yellowstone); *Blakist. Ibis*, 1862, p. 9; *Ross, Canad. Natural.* vii. p. 151 (Mackenzie River) (1862); *id. Nat. Hist. Rev.* (2) ii. p. 286 (1862); *Blakist. Ibis*, 1863, p. 136; *Sclat. P. Z. S.* 1866, p. 203 (Zool. Gard.); *Schleg. Mus. P.-B.*, Anseres, p. 83 (1866); *Murie, P. Z. S.* 1867, pp. 6, 11, 12, 13: *Hincks, P. Z. S.* 1868, pp. 211–213; *Brown, Ibis*, 1868, p. 425 (Vancouver Isl.); *Dall & Bann. Tr. Chic. Acad.* i. p. 294 (1869) (Frazer River and Yukon); *Turnb. B. E. Pa.* p. 45 (1869) (Chesapeake Bay); *Eyton, Syn. Anat.* p. 49 (1869); *Sclat. P. Z. S.* 1870, p. 664 (Zool. Gard.); *Trippe, Pr. Ess. Inst.* vi. p. 119 (1871) (Minnesota); *Merr. U.S. Geol. Surv. Terr.* p. 703 (1872) (Wyoming); *Gieb. Thes. Orn.* i. p. 855 (1872): *Coues, Key*, p. 281 (1872); *id. Check-list*, n. 476 (1873); *Snow, B. Kans.* p. 11 (1873) (Iowa); *Garrod, P. Z. S.* 1873, p. 467 (carotids), p. 639; *Ridgw. Ann. Lyc. N. Y.* x. p. 388 (1874) (Illinois); *Coues, Birds N.-W.* p. 544 (1874); *Adams, Ibis*, 1878, p. 430 (Michalaski); *Sclat. P. Z. S.* 1880, p. 506; *Forbes, P. Z. S.* 1882, p. 352; *Coues, Check-list*, 2nd ed. p. 110, n. 688 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 70 (1882); *Huet, Bull. Soc. Zool. Fr.* 1882, p. 353 (breeding in captivity); *Sclat. List Vert. An.* 8th ed. p. 424, n. 946 (1883); *B. O. U. List Br. B.* p. 121 (1883); *Coues, Key N. Am. B.* 2nd ed. p. 682 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 322 (1884–85); *?Babingt. B. of Suff.* p. 243, pls. v., vi. (1886); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 296 (1891).

Olor buccinator, *Wagl. Isis*, 1832, p. 1234; *Bp. Compt. Rend.* xliii. p. 648, n. 6 (1856); *G. R. Gr. Hand-list*, iii. p. 78, n. 10603 (1871); *Ridgw. Nom. N. Am. B.* n. 589 (1881); *Stejn. Pr. U.S. Nat. Mus.* v. p. 216 (1882); *B., B., & R. Water-Birds N. Am.* i. p. 430 (1884); *A. O. U. Code of Nom. & Check-list*, p. 130, n. 181 (1886); *Ridgw. Man. N. Am. B.* p. 120 (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 425 (nest and eggs) (1891); *Hatch, B. of Minnes.* p. 83 (1892).

Cygnus passmori, *Hincks, Journ. Linn. Soc.* viii. p. 1 (1864) (Toronto); *Murie, P. Z. S.* 1867, pp. 8–13; *Hincks, P. Z. S.* 1868, p. 211; *Coues, Key N. A. B.* p. 281 (1872).

Olor passmorii, *G. R. Gr. Hand-list*, iii. p. 78, n. 10604 (1871); *Boucard, Cat. Av.* p. 57 (1876).

Tail usually of 24 feathers; bill longer than the head.

Adult. Plumage entirely pure white; the head, sometimes the neck also, or even the entire lower parts tinged with rusty; bill, naked lores, legs, and feet uniform deep black: iris brown. Total length about 58·50–68 inches, wing 21–27·25, tail 8, culmen 4·34–4·70, tarsus 4·54–4·92.

The arrangement of the trachea in this species is very different from that in *C. columbianus*: it has, besides the horizontal bend, a vertical flexure which occupies a prominent protuberance on the anterior portion of the dorsal aspect of the sternum; further, the posterior portion of the channel through which the trachea passes, swells more or less into an irregular bulb.

Young. "In winter the young has the bill black, with the middle portion of the ridge to the length of an inch and a half light flesh-

colour, and a large elongated patch of a light dull purple on each side; the edge of the lower mandible and the tongue dull yellowish flesh-colour. The eye is dark brown. The feet are dull yellowish brown, tinged with olive; the claws brownish black, the webs blackish brown. The upper part of the head and the cheeks are light reddish brown, each feather having, towards its extremity, a small oblong whitish spot, narrowly margined with dusky; the throat nearly white, as well as the edge of the lower eyelid. The general colour of the other parts is greyish white, slightly tinged with yellow; the upper part of the neck marked with spots similar to those on the head." (*Audubon.*)

"*Cygnets* are of a uniform ashy grey in their first plumage, darker than in the corresponding plumage of *C. olor.*" When moulting they "seem to be whiter on the breast and darker on the back than the Common Swan at the same period." (*Sclater.*)

Hab. Interior of North America, more rare or less generally distributed towards the Pacific coast, rare or accidental along the Atlantic coast; breeding from Iowa and Dakota northward.

a. Ad. sk.	Vancouver Is. (*J. K. Lord*).	Brit. N. Amer. Boundary Comm. [P.].
b. Ad. sk.	Snake R., Washington, Sept. (*Curtis*).	Salvin-Godman Coll.
c. Juv. sk.	California.	J. Richards, Esq. [P.].
d. Skeleton.	N. America.	Zool. Soc.
e. Sternum with trachea.		

5. Cygnus olor.

Tame Swan, *Edw. Birds*, pl. 150 (head) (1743).
Cygnus, *Briss. Orn.* vi. p. 288 (1760).
Anas cygnus *β*, *Linn. S. N.* i. p. 194 (1766).
Cygnus mansuetus, *Salerne, Orn. ou Tr. des Ois.* p. 404 (1767); *Flem. Br. An.* p. 126 (1828); *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844); *Degl. & Gerbe, Orn. Eur.* ii. p. 475 (1867); *Dub. Faun. Belg., Ois.* ii. p. 416, pl. 249 (1892).
Cigne, *D'Aubent. Pl. Enl.* 913.
Cygne, *Buff. Hist. Nat. Ois.* ix. p. 3, pl. 1 (1783).
Anas cygnas (*errore?*), *Bodd. Tabl. Pl. Enl.* p. 54, n. 913 (1783).
Mute Swan, *Lath. Syn.* iii. 2, p. 436, n. 2 (1785).
Anas cygnus (mansuetus), *Lath. Gen. Syn. Suppl.* i. p. 297 (1787).
Anas olor, *Gm. S. N.* i. 2, p. 502, n. 47 (1788); *Lath. Ind. Orn.* ii. p. 834, n. 2 (1790).
Anser cygnus *a*, *Bonn. Enc. Méth.* i. p. 107, pl. 28 (upper figure) (1790).
Cygnus gibbus, *Bechst. Gemeinn. Naturg. Deutschl.* iv. p. 815 (1809); *Meyer, Taschenb. deutsch. Vögelk.* ii. p. 501 (1810); *Brehm, Isis*, 1830, p. 995; *Wagl. Isis*, 1832, p. 1234; *Nordm. Bull. Ac. Sc. St. Pétersb.* 1834, p. 450; *Stejn. Pr. U.S. Nat. Mus.* v. p. 189 (1882); *Sundev. Ibis*, 1886, p. 408 (osteol.).
Cygnus sibilus, *Pall. Zoogr. Rosso-As.* ii. p. 215 (1811).
Cygnus mutus, *Forst. Syn. Cat. Br. B.* p. 64 (1817).

Cygnus olor, *Vieill. N. D.* ix. p. 37 (1817); *Dum. Dict. Sc. Nat.* xii. p. 308 (1818); *Steph. Gen. Zool.* xii. 2, p. 15, pl. 38 (1824); *Brehm, Isis*, 1830, p. 995; *Less. Tr. d'Orn.* p. 629 (1831); *Bennett, Gard. & Menag. Zool. Soc., Birds*, p. 165 (1831); *Temm. Man. d'Orn.* iv. p. 529 (1835); *Gould, B. Eur.* pl. 354 (1837); *Less. Compl. de Buff., Ois.* ix. p. 527 (1837); *id. op. cit.* 2nd ed. p. 718 (1838); *Bp. Comp. List*, p. 55, n. 392 (1838); *Eyt. Mon. Anat.* p. 96, pl. 3. f. 11 (sternum) (1838); *Blainv. Compt. Rend.* vii. p. 1023 (1838); *Less. Rev. Zool.* 1839, p. 321; *Rüpp. Mus. Senckenb.* iii. p. 5 (1839); *K. & B. Wirbelth. Eur.* pp. lxxxii, 222 (1840); *Naum. Vög. Deutschl.* xi. p. 442, Taf. 295 (1842); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Schleg. Rev. Crit.* p. cxi (1844); *G. R. Gr. Gen. B.* iii. p. 610, n. 1 (1844); *Rchnb. Syn. Av.*, Natatores, t. 105. ff. 252–54 (1845); *Wallengr. Naumannia*, 1854, p. 266 (Scandinavia); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 1 (1856); *Heugl. Syst. Ueb.* p. 65 (1856); *Parker, P. Z. S.* 1863, pp. 515, 517; *Radde, Reis. S. O.-Sibir.* ii. p. 350 (Dauria) (1863); *Schleg. Mus. P.-B.*, Anseres, p. 78 (1866); *Tristr. Ibis*, 1868, p. 327; *Wright, Ibis*, 1869, p. 248 (Malta); *Eyt. Syn. Anat.* p. 44 (1869); *Elwes & Buckl. Ibis*, 1870, p. 338 (Turkey); *Hutt. ibid.* p. 397 (Auckland, introduced); *Sclat. P. Z. S.* 1870, p. 664; *G. R. Gr. Hand-list*, iii. p. 78, n. 10957 (1871); *Nathus. J. f. O.* 1871, p. 255 (egg); *Shell. B. of Egypt*, p. 278 (1872); *Sund. Met. nat. Av. disp. Tent.* p. 146 (1872); *Gould, B. Gr. Brit.* v. pl 8 (part xxi., 1872); *Gieb. Thes. Orn.* i. p. 856 (1872); *Brooke, Ibis*, 1873, p. 342 (Sardinia); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Danf. & Harvie Brown, Ibis*, 1875, p. 426 (Transylvania); *Garrod, P. Z. S.* 1875, p. 348; *Dress. Ibis*, 1876, p. 416; *Scully, Str. Feath.* iv. p. 197 (E. Turkestan) (1876); *Forbes, P. Z. S.* 1877, p. 307, 312, 317 (bursa Fabricii); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 44 (1877); *Prjev. Rowl. Orn. Misc.* iii. p. 99 (1878); *Blanf. Str. Feath.* vii. p. 99 (Sindh) (1878); *Hume, ibid.* pp. 101, 106 (India) (1878); *id. P. A. S. B.* 1878, p. 138 (Sindh); *Bogd.* [*B. Cauc.*] p. 170 (Terek) (1878); *Dress. B. Eur.* vi. p. 419, pls. 418, 419. ff. 5, 6 (heads) (1880); *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. ibid.* p. 505; *Hume & Marsh. Game-B. Ind.* iii. p. 41, pl. 5 (1880); *Forbes, P. Z. S.* 1882, p. 352; *Seebh. Ibis*, 1882, p. 227 (Astrakan); *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 71 (1882); *Seebh. Ibis*, 1883, p. 33 (Caucasus); *B. O. U. List Br. B.* p. 119 (1883); *Sclat. List Vert. An.* 8th ed. p. 423 (1883); *Tristr. Faun. & Flor. of Palest.* p. 114 (1884); *Seebh. Ibis*, 1884, p. 429 (Lenkoran); *Bunge, Mél. Biol.* 1884, p. 47 (Lena Delta); *Radde, Ornis Cauc.* p. 448 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 324 (1884–85); *Seebh. Hist. Br. B.* iii. p. 476, pl. 57 (egg) (1885); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; ? *Tacz. P. Z. S.* 1888, p. 458 (Ginzan, Corea!); *Guillem. Ibis*, 1888, p. 111 (Cyprus); *Lilford, Ibis*, 1889, p. 345; *Tristr. Cat. Coll. B.* p. 51 (1889); *Rchnw. J. f. O.* 1890, p. 80; *Lydekk. P. Z. S.* 1891, p. 410, f. 3 *b*; *Evans, Ibis*, 1891, p. 71 (incubation); *Saund. ibid.* p. 185; *Hartert, Kat. Vogelsamml.* p. 226 (1891); *Sharpe, Sc. Res. Sec. Yark. Miss., Aves*, p. 127 (1891); *id. Cat. Osteol. Spec. Coll. Surg.* iii. p. 295 (1891); *Seebh. Ibis*, 1892, p. 26 (Heligoland).

Cygnus gibbosus, *Kuhl, Buff. Fig. Av. Nom. Syst.* pp. 16, 26 (1820).

Olor mansuetus, *Bp. Cat. Met. Ucc. Eur.* p. 68, n. 411 (1842).

Cygnus sibilans, *Nilss. Skand. Faun., Fogl.* 3rd ed. ii. p. 386 (1858).
Cygnus tuberculirostris, *C. F. Dub. Pl. Col. Ois. Belg.* iii. p. 300 (1860).
Cygnus immutabilis, *Pelz.* (*nec Yarr.*) *Verh. z.-b. Ges. Wien*, xii. p. 785 (1862) (Menzaleh, Egypt).
Cygnus unwini, *Hume, Ibis*, 1871, p. 413; *Salv. ibid.* (note, =C. olor); *Blanf. Str. Feath.* vii. p. 100 (1877); *Hume, ibid.* p. 104 (=olor juv.) (1878); *Stejn. Pr. U.S. Nat. Mus.* v. p. 195 (1882).
Cygnus, sp., *Stoliczka, J. A. S. B.* 1872, p. 299 (Cutch); *Hume, Str. Feath.* iv. p. 33 (1876), vii. p. 104 (1878).
Cygnus pelzelni, *Stejn. Pr. U.S. Nat. Mus.* v. p. 197 (Lake Menzaleh) (1882) (jun.?).

Var. domestica.

? Anas dircæa, *Herm. Obs. Zool.* p. 139 (1809).
Cygnus immutabilis, *Yarr. P. Z. S.* 1838, p. 19 (Medway, England); *Bp. Comp. List*, p. 55, n. 383 (1838); *Eyton, Mon. Anat.* p. 96 (1838); *Blainv. Compt. Rend.* vii. p. 1024 (1838) (=? C. olor ferus); *Wiegm. Arch. f. Naturg.* 1838, i. p. 371; *Pelerin, Mag. N. H.* 1839, p. 172 (osteol. diff.); *Less. Rev. Zool.* 1839, p. 322; *K. & B. Wirbelth. Eur.* p. lxxxiv (note) (1840); *Yarr. Br. B.* iii. p. 121 (with fig.) (1843); *id. Gen. B.* iii. p. 510, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 106. f. 965 (1845); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 227 (1860); *Powys, Ibis*, 1860, p. 351 (Ionian Isl.); *Degl. & Gerbe, Orn. Eur.* ii. p. 476 (1867); *Eyt. Syn. Anat.* p. 45 (1869); *? Flw. & Buckl. Ibis*, 1870, p. 338 (Epirus); *Field*, July 1871; *G. R. Gr. Hand-list*, iii. p. 78, n. 10598 (1871); *Brügg. Zool. Gärt.* 1875, p. 321 (=olor var.); *Sclat. P. Z. S.* 1865, p. 466 (breeding); *Southw. Tr. Norf. Nat. Soc.* ii. pp. 258–260 (1876); *Dress. B. Eur.* vi. p. 429, pl. 419. ff. 1, 2 (heads) (1880); *Sclat. P. Z. S.* 1880, p. 506; *Forbes, P. Z. S.* 1882, p. 352; *Stejn. Pr. U.S. Nat. Mus.* v. p. 192 (1882); *B. O. U. List Br. B.* p. 120 (1883); *Saund. Yarrell's Hist. Br. B.* iv. p. 340 (1884–85); *Seebh. Hist. Br. B.* iii. p. 478 (1885); *Southw. in Stevens. B. of Norfolk*, iii. p. 111 (1890); *Rchnw. J. f. O.* 1890, p. 80.
Olor immutabilis, *Bp. Cat. Met. Ucc. Eur.* p. 68, n. 412 (1842).
Cygnus olor immutabilis, *Schleg. Rev. Crit.* p. cxii (1844) (England, Holland).
Cygnus olor *a.* immutabilis, *Bp. Compt. Rend.* xliii. p. 648 (1856).
Cygnus olor, part., *Schleg. Mus. P.-B.*, Anseres, p. 18, spec. 3 (Haarlem) (1866); *Gieb. Thes. Orn.* i. p. 856 (1872); *Sclat. List Vert. An.* 8th ed. p. 423, spec. *e*, *q*, *r* (1883).
Polish Swan, *Gurn. P. Z. S.* 1877, p. 379.
Cygnus mansuetus, part., *Dub. Faun. Belg., Ois.* ii. p. 416 (1892).

Hybrids.

Cygnus olor × Anser ferus, *var.* domesticus, *Crommelin, Ibis*, 1869, p. 127.
Cygnus olor ♂ × C. ferus ♀, *Dunn, Naturalist*, 1890, p. 281; *Leverk. J. f. O.* 1890, p. 217.
Cygnus olor ♂ × Anser cinereus ♀, *Leverk. l. c.*
Cygnus olor ♂ × Anser domesticus ♀, *Leverk. l. c.*
Cygnus immutabilis × (Bernicla leucopsis × B. canadensis), *Leverk. l. c.*
Cygnus olor ♀ × Anser cinereus ♂, *Leverk. l. c.* p. p. 218.
Cygnus olor ♀ × C. atratus ♂, *Leverk. l. c.*

Adult. Entire plumage pure white; lores, frontal tubercle, base of the upper mandible, nostrils, nail, edges of the upper mandible, and entire under mandible black, remainder of the beak reddish orange; legs and feet dull black; irides hazel. Total length 4 feet 8 inches to 5 feet, wing 27 inches, tail 10, culmen 4·2, tarsus 4·5.

Female. Similar to the male, but somewhat smaller, the neck more slender; the tubercle at the base of the beak smaller.

Young. Plumage almost a sooty grey; neck and under surface of the body lighter in colour; beak lead-colour; nostrils and the basal marginal line black.

Cygnets. Covered with soft brownish or dull ashy-grey down, which on the lower throat and breast becomes much paler, almost white; bill and legs lead-grey.

In this bird the keel of the sternum is simple, unprovided with any cavity.

I quite agree with Mr. Seebohm and others, who believe that the so-called Polish Swan can only be regarded as a quasi-albino produced by domestication. None of the characters attributed to *C. immutabilis* are constant.

Hab. Denmark and South Sweden, South Russia, Valley of the Danube, Transylvania and Greece, and passing the northern shores of the Caspian, to Turkestan and Mongolia; winters in the southern portions of the Caspian, occasionally in the extreme north-west of India, and in the basin of the Mediterranean.

a. Ad. st.	Nairn, N.B. (*immutabilis*).	Duncan Baillie, Esq. [P.].
b. Juv. sk.	Achill Is., Ireland.	J. R. Sheridan, Esq. [P.].
c. Ad. st.	Gt. Britain.	Dr. Dowler [P.].
d. Imm. st.	Marshes near Horning, Norfolk (*immutabilis*).	M. C. Cooke, Esq. [P.].
e. ♂ imm. sk.	Brundall, Norfolk, Sept. (*J. H. Fawcett*).	Dr. R. Bowdler Sharpe [P.].
f. Juv. [head].	Yarmouth.	J. E. Harting, Esq. [P.].
g. Juv. st.	River Severn.	J. R. Johnson, Esq. [P.].
h. Juv. sk.	Poole Harbour, Dorset, Sept.	Baron A. von Hügel [P.].
i. Pull. sk.	Thames R.	Gould Coll.
k. Ad. [head].	Kingsbury.	J. E. Harting, Esq. [P.].
l. Ad. [head & legs].	Bashaw.	Salvin-Godman Coll.
m. Juv. [head & legs].	Sidemi, Ussuri, Oct. (*Jankowsky*).	Seebohm Coll.
n. Ad. sk.	Sehwan District, Sindh, Feb. (*Watson*).	Hume Coll.
o. Imm. sk.	Peshawar, June.	Hume Coll.
p, q. ♂ ♀ juv. sk.	Jubbee Stream, nr. Hazara, and R. Pindee, Jan. (*W. H. Unwin*).	Hume Coll. (Types of *C. unwini*, Hume.)
r. Skeleton (*immutabilis*).		
s, t. Skeletons.		
u, v, w. Skulls.		

x. Sternum. Nairn, N.B. (*immutabilis*). Duncan Baillie, Esq. [P.].
y. Sternum with trachea.
z. Sternum. Algeria.

6. Cygnus melancoryphus.

Anas melancorypha, *Mol. Sagg. Stor. Nat. Chili*, p. 207 (1782); *id. op. cit.* 2nd ed. p. 199 (1810); *Brandis, Uebers. Molin. Naturg. Chili*, p. 207 (1786).

Black-necked Swan, *Lath. Syn.* iii. 2, p. 438, n. 3 (1785); *Griff. An. Kingd.* iii. p. 661, pl. — (1829).

Anas nigricollis, *Gm. S. N.* i. 2, p. 502, n. 48 (1788) (*ex Bougainville*); *Lath. Ind. Orn.* ii. p. 834, n. 3 (1790).

Anas melanocephala, *Gm. S. N.* i. 2, p. 502, n. 49 (1788) (*ex Molina*).

Anser melancoryphus, *Bonn. Enc. Méth.* i. p. 108, n. 2 (1790).

Anser nigricollis, *Bonn. l. c.* n. 3 (1790).

Cisne de cabeza negra, *D'Azara, Apunt.* iii. p. 404, n. 425 (1805); *id. Voy. (Sonn. ed.)*, iv. p. 223 (1809).

Cygnus melanocephalus, *Vieill. N. D.* ix. p. 42 (1817); *Blainv. Compt. Rend.* vii. p. 1026 (1838); *Licht. Nomenel. Av.* p. 101 (1852).

Cygnus nigricollis, "*Lath.*," *Dum. Dict. Sc. Nat.* xii. p. 313 (1818); *Steph. Gen. Zool.* xii. 2, p. 17 (1824); *Boie, Isis*, 1826, p. 981; *Eyt. Mon. Anat.* p. 98 (1838); *D'Orb. Voy. Am. Mér., Itin.* ii. p. 304 (note) (1839); *id. Wiegm. Arch.* 1839, i. p. 57; *Less. Rev. Zool.* 1839, p. 323; *Rüpp. Mus. Senck.* iii. p. 8 (1839); *Pöpp. ibid.* p. 9 (note) (1839); *Fraser, P. Z. S.* 1843, p. 118 (Chili); *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844); *id. Gen. B.* iii. p. 610, n. 3 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Rchnb. Syn. Av.*, Natatores, t. 106. f. 967 (1845); *Yarr. P. Z. S.* 1847, p. 54 (egg); *Hartl. Ind. Azar. Apunt.* p. 27, n. 425 (1847); *Des Murs in Gay's Hist. Chile*, i. p. 445, pl. 14 (1848); *Bibra, Denkschr. k. Ak. Wissensch.* v. 2, p. 131 (1853) (cf. *J. f. O.* 1855, p. 57); *Thien. Fortpflanzsg.* t. 76. f. 3 (egg) (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 2 (1856); *Burm. Syst. Ueb.* iii. p. 432 (Sta. Catharina I.) (1856); *Cass. U.S. Astron. Exp., Zool.* p. 200 (1856); *Gould, P. Z. S.* 1859, p. 98; *Sclat. ibid.* p. 206 (Falkland Isl.); *Burm. J. f. O.* 1860, p. 266; *Wolf & Sclat. Zool. Sketch.* i. pl. 48 (1861); *Abbott, Ibis*, 1861, p. 159 (Falklands); *Burm. La-Plata Reise*, ii. p. 512 (1861); *Schleg. Dierent.* p. 277, with fig. (1864); *Pelz. Reise Novara, Vög.* p. 137 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 79 (1866); *Sclat. P. Z. S.* 1867, p. 334; *Ph. & Landb. Cat. Av. Chil.* p. 50 (1868); *Cunningh. Ibis.* 1868, p. 488; *Scl. & Salv. P. Z. S.* 1868, p. 145 (Conchitas); *iid. Ibis*, 1869, p. 284 (Elizabeth Isle); *Eyt. Syn. Anat.* p. 46 (1869); *Sclat. P. Z. S.* 1869, p. 629 (Zool. Gard.), 1870, p. 665 (Zool. Gard.); *Pelz. Orn. Bras.* p. 459 (1870); *Sclat. & Salv. Ibis*, 1870, p. 504 (eggs, Elizabeth Island); *JB. Zool. Gen. Amst.* 1871, pp. 196–198; *G. R. Gr. Hand-list*, iii. p. 78, n. 10599 (1871); *Gieb. Thes. Orn.* i. p. 856 (1872); *Burm. P. Z. S.* 1872, p. 365 (Paraná); *Garrod, P. Z. S.* 1873, pp. 467 (carotids), 639; *Sclat. & Salv. Nom. Av. Neotrop.* p. 129, n. 1 (1873); *Garr. P. Z. S.* 1875, p. 348; *Gulliv. ibid.* p. 488; *Durnf. Ibis*, 1876, p. 163; *Sclat. & Salv. P. Z. S.* 1876, p. 370; *Durnf. Ibis*, 1877, pp. 41 (Chuput), 191 (Buenos Ayres), 1878, p. 400 (Centr. Patagonia); *Gibson, Ibis*, 1880,

p. 33; *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. ibid.* pp. 508, 535; *Sharpe, P. Z. S.* 1881, p. 14 (Hugh Bay); *Forbes, P. Z. S.* 1882, p. 352; *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 70 (1882); *A. Milne-Edw. Faun. Rég. Austr.* ch. ix. p. 40 (1882); *Sclat. List Vert. An.* 8th ed. p. 424, n. 970 (1883); *Barrows, Auk*, 1884, p. 273 (Entrerios); *Berl. J. f. O.* 1887, p. 133 (Sta. Catharina, Paraná, and B. Ayres); *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Sclat. Argent. Orn.* ii. p. 124, pl. xviii. (1889); *Tristr. Cat. Coll. B.* p. 51 (1889); *Kerr, Ibis*, 1890, p. 358; *Evans, Ibis*, 1891, p. 71 (incubation); *Frenzel, J. f. O.* 1891, p. 125 (Cordova); *Oust. Miss. Sc. Cap Horn*, iv. *Ois.* p. 185 (1891); *Hartert, Kat. Vogelsamml.* p. 226 (1891); *Holland, Ibis*, 1892, p. 206 (Argentina); *Berk. James, New List Chil. B.* p. 9, n. 147 (1892); *Aplin, Ibis*, 1894, p. 200 (Uruguay).

Anas melanocoryphus, "*Mol.*," *Less. Compl. de Buff., Ois.* ix. p. 528 (1837); *id. op. cit.* 2nd ed. p. 718 (1838).

Sthenelus melancoryphus, *Stejn. Pr. U.S. Nat. Mus.* v. p. 185 (1882).

Sthenelides melancorypha, *Stejn. Kingsl. Stand. Nat. Hist.* iv. p. 143 (1885).

Adult male. Pure white, except the head and the upper two-thirds of the neck, which are black, with a velvet gloss; a narrow white stripe surrounds the eye and extends backward towards the nape; chin white: "iris almost black; bill plumbeous, with the base and knob red; feet pale flesh-colour" (*Natterer*). Total length about 48 inches, wing 17·5, tail 5·5, culmen 3·4, tarsus 3·5.

Female. Similar to the male, only smaller.

Young. No frontal knob; head and neck brown, lighter than in the adult; the white feathers have rusty edges, more conspicuous on the upper parts; tips of the primaries and shafts of the quills chocolate-brown. (*Stejneger.*)

Young in down. White, the upper parts with a faint greyish tinge. (*Stejneger.*)

Hab. Southern Brazil, Paraguay, Uruguay, Argentine Republic, Chili, Patagonia, and Falkland Islands.

a, b. Ad. st.	Chili.	Zool. Soc.
c. Pull. st.	Chili.	Purchased.
d, e. ♂ ad. sk.	Rio Pilmaiquen, Chili, Feb.	H. Berkeley James, Esq. [P.].
f. ♂ imm. sk.	Hugh Bay, W. coast of Patagonia, Dec. (*Coppinger*).	Voy. H.M.S. 'Alert.'
g. Ad. st.	Str. of Magellan.	The Admiralty [P.].
h. Ad. st.	Str. of Magellan.	Sir W. Burnett & Capt. Fitzroy [P.].
i. Ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.
k. Skeleton.		Salvin-Godman Coll.
l. Skeleton.	Chili.	Zool. Soc.
m. Skeleton.	Chili.	T. C. Bridges, Esq. [C.].
n. Sternum.	Patagonia, Oct. (*Coppinger*).	Voy. H.M.S. 'Alert.'

2. CHENOPIS.

Type.
Chenopis, *Wagl. Isis*, 1832, p. 1234 ..... C. atrata.
Chenopsis, *Rchnb. Av. Syst. Nat.* p. x (1852).

Range. Confined to Australia.

1. Chenopis atrata.

Black Swan, *Phill. Bot. Bay*, p. 98 (1789); *Labill. Voy. in Search of La Pérouse*, Engl. ed. i. p. 184, pl. 9 (1800); *Lath. Gen. Syn. Suppl.* ii. p. 343 (1801).

Anas atrata, *Lath. Ind. Orn.* ii. p. 834, n. 4 (1790); *Ranz. El. di Zool.* iii. pt. ix. p. 97 (1826); *Yarr. Tr. Linn. Soc.* xv. p. 382, pl. xii. (trachea) (1826).

Anser novæ hollandiæ, *Bonn. Enc. Méth.* i. p. 108, n. 4 (1790) (*ex Phillips*).

Anas plutonia, *Shaw, Nat. Misc.* iii. pl. 108 (1791); *Cuv. Règn. An.* i. p. 529 (1817).

Cygne noir, *Labill. Voy. rec. La Pér.* i. p. 184, pl. 9 (1800).

Cygnus atratus, *Vieill. N. D.* ix. p. 39 (1817); *Dum. Dict. Sc. Nat.* xii. p. 314 (1818); *Steph. Gen. Zool.* xii. 2, p. 18, pl. 39 (1824); *Vieill. Gal. Ois.* ii. p. 215, pl. 286 (1825); *Yarr. Zool. Journ.* iv. p. 321 (1828); *Less. Man. d'Orn.* ii. p. 407 (1828); *id. Tr. d'Orn.* p. 629, pl. 48. f. 1 (1831); *Bennett, Gard. & Menag. Zool. Soc., Birds*, p. 45, with figure (1831); *Heron, P. Z. S.* 1835, p. 107; *Less. Compl. de Buff., Ois.* ix. p. 529 (1837); *id. op. cit.* 2nd ed. p. 718 (1838); *Blainv. Compt. Rend.* vii. p. 1026 (1838); *Less. Rev. Zool.* 1839, p. 323; *Rüpp. Mus. Senckenb.* iii. p. 9 (1839); *G. R. Gr. Gen. B.* iii. p. 610, n. 9 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Gould, B. Austr.* vii. p. 6 (pt. xx., 1845); *Rchnb. Syn. Av.*, Natatores, t. 105. ff. 251–52 (1845), t. 107. f. 2362 (1850) (*ex Gould*); *Licht. Nomencl. Av.* p. 101 (1854); *Sclat. P. Z. S.* 1859, p. 206 (incubation); *Crisp, P. Z. S.* 1860, p. 238, 1862, p. 142; *Schleg. Mus. P.-B.*, Auseres, p. 80 (1866); *Müll. P. Z. S.* 1869, p. 280; *Sclat. ibid.* p. 629; *Gieb. Thes. Orn.* i. p. 855 (1872); *Pelz. Ibis*, 1873, p. 46; *Garr. P. Z. S.* 1875, p. 348; *Rams. Pr. Linn. Soc. N.S. W.* p. 200, n. 646 (1878); *Sclat. P. Z. S.* 1880, p. 507; *Forbes, P. Z. S.* 1882, p. 352; *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 70 (1882); *Sclat. List Vert. An.* 8th ed. p. 424 (1883); *Legge, Pr. Roy. Soc. Tasm.* 1886 p. 244 (Tasmania) (1886); *Rams. Tab. List Austr. B.* p. 22, n. 657 (1888); *Evans, Ibis*, 1891, p. 71 (incubation); *Hartert, Kat. Vogelsamml.* p. 226 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 296 (1891).

Chenopis atrata, *Wagl. Isis*, 1832, p. 1234; *Bp. Compt. Rend.* xliii. p. 648, n. 7 (1856); *Gould, Handb. B. Austr.* ii. p. 346 (1865); *Rams. Ibis*, 1866, p. 335 (Port Denison); *Hutton, Ibis*, 1870, p. 397 (Auckland, introduced); *G. R. Gr. Hand-list*, iii. p. 78, n. 10605 (1871); *Rams. P. Z. S.* 1877, p. 345; *Stejn. Pr. U.S. Nat. Mus.* v. p. 219 (1882).

Chenopsis atrata, *Rchnb. Av. Syst. Nat.* p. x (1852).

Cygnus plutonius, *Bäd. Die Eier eur. Vög.* Taf. 31. f. 2 (1863); *Nathus. J. f. O.* 1871, p. 252 (egg), 1879, p. 246.

Chenopsis atratus, *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Hybrids.

Black Swan ♂ × White Swan ♀, *Glencon, P. Z. S.* 1847, p. 97.
Cygnus atratus × C. olor, *Leverk. J. f. O.* 1890, p. 217.

Adult male. Brownish black, the under surface paler than the upper; the feathers of the back tipped with greyish brown; primaries and secondaries pure white; tertiaries and scapulars crisp: "bill pinky scarlet, crossed near the tip with a broad band of white; the extremities of both mandibles are also white; irides scarlet; eyelash and lores pinky scarlet; feet black" (*Gould*). Total length about 40 inches, wing 19, tail 4·6, culmen 2·8, tarsus 3·7.

Female. Similar, but somewhat smaller.

Young in down. Upper surface light brownish grey; under surface white; chin and throat white, changing gradually into the greyish tinge of the cheeks; bill and lores brownish black; nail of the bill white; feet dull greyish brown; later on the Cygnets get greyish also on the underparts.

Hab. Australia, except the northern part, and Tasmania.

a. Ad. st.	Australia.	Purchased.
b. Ad. st.	Australia.	Lord Farnborough [P.].
c. Ad. sk.	Australia.	
d, *e.* Pull. sk.		Gould Coll.
f. Juv. sk.		Salvin-Godman Coll.
g. Ad. sk.	N. S. Wales.	Hume Coll.
h. Ad. sk. [pale variety].	Adelaide.	Adelaide Museum [P.].
i. Pull. st.	Southport R., Tasmania.	Gould Coll.
k. Pull. st.	Banks of the R. Thames.	
l, *m.* Pull. st.		J. Baker, Esq. [P.].
n. Skeleton.	Australia.	
o. Sternum with trachea.		

3. COSCOROBA.

	Type.
Coscoroba, *Rchnb. Av. Syst. Nat.* p. x (1852)	C. candida.
Pseudolor, *G. R. Gr. MSS.*, fide *G. R. Gr. Cat. Gen. & Subgen. B.* p. 122 (1855)	C. candida.
Pseudocycnus, *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872)	C. candida.

Range. Confined to the southern part of South America.

1. Coscoroba candida.

Anas coscoroba, *Mol. Sagg. Stor. Nat. Chili*, p. 207 (1782); *Gm. S. N.* i. 2, p. 503, n. 51 (1788); *Lath. Ind. Orn.* ii. p. 835, n. 7 (1790); *Eyd. et Gerv. Mag. de Zool.* 1836, p. 36; *iid. Voy. Favorite, Ois.* p. 62 (1839).

Anser coscoroba, *Bonn. Enc. Méth.* i. p. 112, n. 9 (1790); *Vieill. N. D.* xxiii. p. 332 (1818); *Steph. Gen. Zool.* xii. 1, p. 39 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 471 (1825).

Ganso blanco, *D'Azara, Apunt.* iii. p. 406, n. 426 (1805); *id. Voy.* (*Sonnini's ed.*) iv. p. 325, n. 426 (1809).

Anser candidus, *Vieill. N. D.* xxiii. p. 331 (1816); *id. Enc. Méth.* i. p. 351 (1823); *Steph. Gen. Zool.* xii. 1, p. 38 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 471 (1825).

Cygnus anatoides, *King, P. Z. S.* 1830, p. 15; *Eyt. Mon. Anat.* p. 101 (1838); *Less. Compl. de Buff., Ois.* ix. p. 528 (1837); *id. op. cit.* 2nd ed. p. 718 (1838); *Blainv. Compt. Rend.* vii. p. 1026 (1838); *Less. Rev. Zool.* 1839, p. 323; *Guér.-Mén. ibid.* p. 324; *Cunningh. Ibis*, 1868, p. 488; *Eyt. Syn. Anat.* p. 49 (1869).

Cygnus hyperboreus, *D'Orb.* (*nec Pall.*) *Voy. Am. Mér., Rin.* ii. p. 304 (note) (1839); *id. Wiegm. Arch.* 1839, i. p. 57.

Olor coscoroba, *G. R. Gr. List B. Brit. Mus.* iii. p. 131 (1844).

Cygnus coscoroba, *G. R. Gr. & Mitch. Gen. B.* iii. p. 610, n. 8, pl. 166 (1844); *Rchnb. Syn. Av.*, Natatores, t. 106. f. 966 (1845) (*ex Mitch. & Gr.*); *Hartl. Ind. Az. Apunt.* p. 27, n. 426 (1847); *Des Murs in Gay's Hist. Nat. Chile*, i. p. 446 (1848); *Sclat. P. Z. S.* 1860, p. 388; *Burm. J. f. O.* 1860, p. 266; *id. La-Plata Reise*, ii. p. 512 (1861) (Paraná); *Abbott, Ibis*, 1861, p. 159 (Falklands); *Pelz. Reise Novara, Vög.* p. 137 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 83 (1866); *Sclat. P. Z. S.* 1867, pp. 334, 339 (Chili); *Phil. & Landb. Cat. Av. Chil.* p. 41 (1868); *Sclat. & Salv. Ibis*, 1869, p. 284 (Rio Galegos); *Sclat. P. Z. S.* 1870, p. 666, 1871, p. 545; *Gieb. Thes. Orn.* i. p. 855 (1872); *Burm. P. Z. S.* 1872, p. 365; *Garrod, P. Z. S.* 1873, pp. 467 (carotids), 639; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129, n. 2 (1873); *iid. P. Z. S.* 1876, p. 371; *Durnf. Ibis*, 1876, p. 163, 1877, p. 41 (Chuput), p. 191, 1878, p. 400; *Gibson, Ibis*, 1880, p. 36; *Durnf. ibid.* p. 425; *Sclat. P. Z. S.* 1880, p. 507; *Forbes, P. Z. S.* 1882, p. 352; *Sclat. List Vert. An.* 8th ed. p. 425 (1883); *Berl. J. f. O.* 1887, p. 124; *Withingt. Ibis*, 1888, p. 471; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Frenz. J. f. O.* 1891, p. 125 (Cordova).

Anas chionis, *Illig., fide G. R. Gr. Gen. B.* iii. p. 610 (1844).

Coscoroba candida, *Rchnb. Av. Syst. Nat.* p. x (1852); *Stejn. Pr. U.S. Nat. Mus.* v. p. 179 (note) (1882); *Sclat. Argent. Orn.* ii. p. 126 (1889); *Kerr, Ibis*, 1890, p. 358; *Berk. James, New List Chil. B.* p. 9, n. 148 (Chili) (1892); *Holland, Ibis*, 1892, p. 206 (Argentina); *Aplin, Ibis*, 1894, p. 200 (Uruguay).

Cygnus chionis, *Licht. Nomencl. Av.* p. 101 (1854); *Pelz. & Lorenz, Ann. k. naturhist. Hofmus.* iii. p. 58 (1888).

Coscoroba chionis, *Bp. Compt. Rend.* xliii. p. 648, n. 8 (1856); *G. R. Gr. Hand-list*, iii. p. 79, no. 10606 (1871).

Pseudocycnus coscoroba, *Sund. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 340 (1890).

Pseudolor chionis, *Rchnw. Orn. Centralbl.* 1882, p. 39; *id. Vög. Zool. Gärt.* p. 69 (1882).

Coscoroba coscoroba, *Stejn. Kingsl. Stand. Nat. Hist.* iv. p. 147 (1885).

Pseudolor coscoroba, *Hartert, Kat. Vogelsamml.* p. 226, n. 3350 (1891).

Adult male. White, but the tips of the primaries black: "irides light speckled red" (*Withington*); "bill and feet flesh-colour" (*Giglioli, MS.*). Total length 40 inches, wing 17·5, tail 5·8, culmen 2·7, tarsus 3·8.

Female. Similar to the male.

Hab. Paraguay, Uruguay, Argentina, Chili, Patagonia, and Falkland Islands.

a. Ad. st.	S. America.	Dr. Robertson, R.N. [P.].
b. Ad. sk.	Southern S. America (*Capt. King*).	Eyton Coll. (Type of *Cygnus anatoides*, King.)
c. Ad. st.	Chili.	
d. ♂ ad. sk.	Chili, Feb.	Purchased.
e. Ad. sk.	Chili (*Weishaupt*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Buenos Ayres, April (*F. Withington*).	Sclater Coll.
g. Ad. sk.	Falkland Is.	'Challenger' Exp.*

Subfamily II. ANSERANATINÆ.

4. ANSERANAS.

	Type.
Anseranas (sous-genre), *Less. Man. d'Orn.* ii. p. 418 (1828); *id. Tr. d'Orn.* p. 633 (1831)	A. semipalmata.
Choristopus, *Eyton, Mon. Anat.* p. 8 (1838)	A. semipalmata.

Range. Confined to Australia and Tasmania.

1. Anseranas semipalmata.

Anas semipalmata, *Lath. Tr. Linn. Soc.* iv. p. 103 (1798) (*ex Lambeth's ic. ined.*); *id. Ind. Orn., Suppl.* p. lxix. n. 2 (1801); *Yarrell, Tr. Linn. Soc.* xv. 2, p. 383, pls. xiii., xiv. (trachea) (1827).

Black and White Goose, *Lath. Gen. Syn. Suppl.* ii. p. 344 (1801).

Semipalmated Goose, *Lath. Gen. Syn. Suppl.* ii. p. 347, pl. 139 (1801).

Anas melanoleuca, *Lath. Ind. Orn. Suppl.* p. lxix, n. 1 (1801); *Cuv. Mém. Mus.* xi. p. 345, pl. 19 (1827); *Less. Compl. de Buff., Ois.* ix. p. 531, pl. 49. f. 1 (1837); *id. op. cit.* 2nd ed. p. 719, pl. —. f. 1 (1838).

Anser semipalmatus, *Vieill. N. D.* xxiii. p. 343 (1818); *id. Enc. Méth.* i. p. 352 (1823); *Dumont, Dict. Sc. Nat.* xxxv. p. 472 (1825).

Anser melanoleucus, *Vieill. N. D.* xxiii. p. 344 (1818); *id. Enc. Méth.* i. p. 352 (1823); *Dum. Dict. Sc. Nat.* xxxv. p. 472 (1825).

Bernicla ? melanoleuca, *Steph. Gen. Zool.* xii. 2, p. 62 (1824).

Bernicla semipalmata, *Steph. Gen. Zool.* xii. 2, p. 64 (1824).

Anas (Anseranas) melanoleuca, *Less. Man. d'Orn.* ii. p. 418 (1828); *id. Tr. d'Orn.* p. 633, no. 57 (1831).

Choristopus semipalmatus, *Eyt. Mon. Anat.* p. 78 (1838).

Anseranus melanoleucus, *G. R. Gr. List Gen. B.* p. 72 (1840).

Anseranas melanoleuca, *G. R. Gr. List B. Br. Mus.* iii. p. 125 (1844) *id. Gen. B.* iii. p. 604 (1845); *Rchnb. Syn. Av.*, Natatores, t. 101. f. 950 (1845), t. 91. f. 2654 (1850) (*ex Gould*); *Gould, B. Austr.* vii. pl. 2 (pt. xxxii., 1848); *Rchnb. Av. Syst. Nat.* p. ix, tab. x. (1852);

* Omitted in the 'Challenger' Report.

Bp. Compt. Rend. xliii. p. 649, n. 42 (1856); *Rep. of Council Z. S.* 1856, p. 13 (Zool. Gard.); *Zuchold, J. f. O.* 1858, p. 41 (Turner's Creek); *Bennett, P. Z. S.* 1861, p. 266; *Sclat. P. Z. S.* 1862, p. 185 (Zool. Gard.); *Gould, Handb. B. Austr.* ii. p. 352 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 92 (1866); *Müll. P. Z. S.* 1869, p. 280; *G. R. Gr. Hand-l.* iii. p. 73, n. 10552 (1871); *Gieb. Thes. Orn.* i. p. 374 (1872); *Rams. P. Z. S.* 1875, p. 590; *id. Pr. Linn. Soc. N. S. W.* i. pp. 194, 217 (Clarence River), 219, 220 (1876); *id. P. Z. S.* 1877, p. 345 (Queensland); *Diggl. B. Austr.* ii. p. 109 (1877); *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 648 (1878); *Sclat. P. Z. S.* 1880, pp. 497, 535; *Forbes, P. Z. S.* 1882, p. 350 (trachea); *Sclat. List Vert. An.* 8th ed. p. 415, n. 940 (1883); *Rams. Tab. List*, p. 22, n. 659 (1888); *Petterd, Pr. R. Soc. Tasm.* 1888, pp. 91, 92 (Tasmania); *Tristr. Cat. Coll. B.* p. 52 (1889).

Anseranas melanoleucos, *Bolle, J. f. O.* 1856, p. 166 (Zool. Gard.).

Cygnus melanoleucus, *Schleg. Dierent.* p. 277 (1864).

Anseranas semipalmatus, *Eyt. Syn. Anat.* p. 23 (1869).

Choristopus melanoleucus, *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Rchnw. Vög. Zool. Gärt.* p. 68 (1882); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 340 (1890).

Anseranas melanoleucus, *Salv. Cat. B. Strickl. Coll.* p. 528, n. 2568 (1882); *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. p. 289 (1891).

Anseranas semipalmata, *Stejn. Stand. Nat. Hist.* iv., *Birds*, p. 139 (1885).

Adult. Head, neck, mantle, wings, tail, and thighs black; back, rump, breast, abdomen, upper and under tail-coverts, scapulars, and smaller upper wing-coverts white: "irides blackish brown; bill reddish brown; feet yellow" (*Gould*). Total length 35 inches, wing 18·5, tail 8, bill 3·25, tarsus 3·62.

Immature birds have the middle of the back and scapulars black: the sides of the bill almost smooth, with no horny productions, or scarcely any.

Hab. Australia and Tasmania.

a. Ad. st.	Australia.	Purchased.
b. Imm. sk.	Australia.	Salvin-Godman Coll.
c. ♂ ad. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
d. Ad. sk.	N. S. Wales.	Hume Coll.
e. Ad. st.	Murray R.	Sir G. Grey [P.].
f. Ad. st.	S. Australia.	Sir G. Grey [P.].
g. Skeleton.	S. Australia.	Zool. Soc.
h. Skeleton.		Salvin-Godman Coll.
i, k. Skeletons.		

Subfamily III. PLECTROPTERINÆ.

Key to the Genera.

a. Lores naked; forehead and base of the bill furnished with caruncles. [p. 46.

a'. Long spurs on the wings ..... 5. PLECTROPTERUS,

b'. Wings without spurs ..... 6. CAIRINA, p. 51.

b. Lores densely feathered.

c'. A large fleshy comb on the base of the culmen of the male ..... [p. 54. 7. SARCIDIORNIS,

d'. No comb on the base of the culmen of the males.

d''. Head not crested.

*e*³. Bill longer or equal to double the depth at base.

*e*⁴. Bill longer or about the length of the head.

*e*⁵. Outline of the loral feathering at the base of the bill with the convexity anteriorly ..... [p. 59. 8. ASARCORNIS,

*f*⁵. Outline of the loral feathering at the base of the bill straight and inclined backwards ..... [p. 61. 9. RHODONESSA,

*f*⁴. Bill shorter than the head, with the outline of the loral feathering at the base of the bill inclined anteriorly; frontal feathers at the base of the culmen almost in a straight line ..... [p. 63. 10. PTERONETTA,

*f*³. Bill not so long as double the depth at base; size very small; young in down with tail-feathers very long and stiff ..... 11. NETTOPUS, p. 64.

e''. Head crested; young in down with tail-feathers long and stiff ..... 12. ÆX, p. 72.

5. PLECTROPTERUS.

	Type.
Plectropterus, *Leach, MSS.*; *Steph. Gen. Zool.* xii. 2, p. 6 (1824)	P. gambensis.
Plectrophanes, "*Leach*" (*errore?*), *Griff., Cuv. An. Kingd.* iii. p. 600 (1829); *Brandt, Descr. et Ic. An. Ross. Nov., Aves*, fasc. i. p. 6 (1836).....	P. gambensis.

Range. Confined to Africa.

I feel very doubtful about the number of species to be recognized in the present genus. Perhaps, after all, there is only one species. At present it appears that there are four species or geographical races, all very difficult to define, chiefly from want of a large series of specimens, properly dated and sexed, from the same locality, which would enable one to understand the variations according to age.

1. The Abyssinian race (*P. rüppelli*), which extends westwards to some unknown region; the adult male has a very prominent frontal knob, bare rhomboidal spaces on the sides of the neck, the throat and under tail-coverts white.

2. An Equatorial race (*P. gambensis*), which extends from Gambia and Bissao to Angola and Damara-land, and across to Eastern Africa: the adult male is similar to that of *P. rüppelli*, but has a smaller frontal knob; the throat and under tail-coverts are white as in *P. rüppelli*.

3. A South-eastern African race (*P. niger*), of a very large size; the adult (?) male has scarcely any frontal knob, the throat and under tail-coverts mostly black, the sides also extensively black, and no caruncles on the naked forehead.

4. A Shoan race (*P. scioanus*); the adult male (?) is similar to that of *P. niger*, but has the naked skin of the forehead covered with many caruncles.

Key to the Species.

a. Throat and under tail-coverts white; abdomen broadly white; adult males with a distinct frontal knob, and bare rhomboidal spaces on the sides of the neck.
  a'. Frontal knob very prominent in adult males.. *rüppelli*, p. 47.
  b'. Frontal knob smaller in adult males ..... *gambensis*, p. 48.
b. Throat and under tail-coverts mostly black; the white on the abdomen much reduced, the black on the sides being much extended; size very large.
  c'. Adult males with a small frontal knob; many caruncles on the naked skin of the forehead.. *scioanus*, p. 51.
  d'. Adult males with scarcely any frontal knob, and with no caruncles on the naked skin of the forehead ..... *niger*, p. 50.

1. Plectropterus rüppelli.

Cygnus gambensis, *Rüpp.* (*nec Linn.*) *Mus. Senckenb.* iii. p. 12 t. 1 (1839); *Schleg. Dierent.* p. 277 (1864).

Plectropterus gambensis, *Childr.* (*nec Linn.*) *in Denh. & Clappert. Trav.* ii. App. p. 204 (1826); *Rüpp. Syst. Uebers.* p. 137, n. 485 (1845) (Abyssinia and Sennaar); *Rchnb. Syn. Av.*, Natatores, t. 110. f. 984 (*ex Rüppell*) (1845); *Vierth. Naumannia*, 1852, pp. 40, 41, 42; *Brehm, J. f. O.* 1854, p. 84 (Sudan); *Hartl. ibid.* p. 302 (part.); *Brehm, Vogelf.* p. 365 (1855); *Heugl. Uebers.* n. 680 (1856); *Hartl. Syst. Orn. Westafr.* p. 246, n. 697 (part.) (1857); *Brehm, J. f. O.* 1857, p. 378 (N.E. Afr.), 1858, pp. 409, 410, 471; *Heugl. J. f. O.* 1863, pp. 4, 164; *Antin. Cat. Descr.* p. 112 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 93 (part.) (1866); *Heugl. Reise Abess.* 1861–62, p. 288 (1868); *id. Reis. in d. Geb. Weiss. Nil*, 1862–64, pp. 133, 384 (1869); *id. Peterm. Geogr. Mitth.* 1869, p. 413.

Anser (Plectropterus) gambensis, *Brehm, J. f. O.* 1853, Extrah. p. 104 (N.E. Africa), 1855, pp. 486, 488, 1856, p. 468.

? Plectropterus brevirostris, *Brehm, Vogelf.* p. 365 (1855).

Plectropterus rüppelli, *Sclat. P. Z. S.* 1859, p. 132, pl. 153. f. 1, 1860, pp. 28–42 (with cut of the head and trachea); *Hartl. J. f. O.* 1861, p. 272; *Eyt. Syn. Anat.* p. 24 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 801 (part.) (1870); *G. R. Gr. Hand-list*, iii. p. 73, n. 10554 (1871); *Sclat. P. Z. S.* 1876, p. 696 (Zool. Gard.), 1877, p. 48, 1880, p. 498; *Rchnw. Vög. d. Zool. Gärt.* p. 68 (1882); *Sclat. List Vert. An.* 8th ed. p. 415, n. 942 (E. Africa) (1883); *Hartert, Kat. Vogelsamml.* p. 226, n. 3352 (Abyssinia) (1891).

Anas rüppelli, part., *Gieb. Thes. Orn.* i. p. 352 (1872).
Plectropterus gambiensis, part., *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1275 (1873).

Adult male. Similar to that of *P. gambensis*, but larger, and with a very high frontal knob; two rhomboidal naked spaces on the sides of the neck; cheeks and throat white. Total length about 40 inches, wing 21·5, tail 10, bill from the gape 3·5, tarsus 4·25.

Female. Similar to the male, but smaller and without the frontal knob.

Hab. North-east Africa, westwards as far as the Central part.

a. [♂?] ad. st. Central Africa. Capt. Clapperton [P.].
b. [♀?] ad. st. Africa. Zool. Soc.
c. Skeleton.
d. Skeleton (head figured, P. Z. S. 1860, p. 30, f. 2).

2. Plectropterus gambensis.

Anser gambensis, *Briss. Orn.* vi. p. 283 (1760); *Shaw, Mus. Lever.* p. 229, pl. 56 (1793); *Vieill. N. D.* xxiii. p. 328, pl. M 2. f. 1 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 464 (1825); *Benn. Zool. Gard. Menag.* ii. p. 207 with fig. (1831); *Less. Compl. de Buff., Ois.* ix. p. 526 (1837); *id. op. cit.* 2nd ed. p. 717 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxiv, 225 (1840); *Yarr. P. Z. S.* 1841, p. 71 (trachea); *Schleg. Rev. Crit.* p. 106 (Europe?) (1844).

Anas gambensis, *Linn. S. N.* i. p. 195, n. 3 (1766); *Gm. S. N.* i. 2, p. 503, n. 3 (1788); *Lath. Ind. Orn.* ii. p. 839, n. 19 (1790); *Cuv. Règn. An.* i. p. 530 (1817); *Lath. Gen. Hist.* x. p. 241 (1824); *Cuv. Règn. An.* 2nd ed. i. p. 567 (1829); *Lafr. Mag. de Zool.* 1834, p. —, pls. 29, 30; *Gieb. Thes. Orn.* i. p. 352 (part.) (1872).

Spur-winged Goose, *Lath. Syn.* iii. 2, p. 452, n. 15, t. cii. (1785).

Anser spinosus, *Bonn. Enc. Méth.* i. p. 118, pl. 29. f. 1 (1790) (*ex Latham*).

Plectropterus gambensis, *Steph. Gen. Zool.* xii. 2, p. 7, pl. 36 (1824) (*ex Bonnaterre*?); *Eyt. Mon. Anat.* pp. 10, 79 (1838); *G. R. Gr. List Gen. B.* p. 72 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 427 (1842); *G. R. Gr. Gen. B.* iii. p. 604 (1845); *Rchnb. Syn. Av.*, Natatores, t. 105. f. 246 (1845); *id. Av. Syst. Nat.* p. ix (part.) (1852); *Licht. Nomencl. Av.* p. 101 (Senegal) (1854); *Hartl. J. f. O.* 1854, p. 302 (part.); *Bp. Compt. Rend.* xliii. p. 649, n. 40 (part.) (1856); *Hartl. Syst. Orn. Westafr.* p. 246, n. 697 (part.) (1857); *Sclat. P. Z. S.* 1859, pp. 131, 132, pl. 153. f. 2, 1860, pp. 38, 39 (skull), 40, 41 (trachea); *Hartl. J. f. O.* 1861, p. 272 (Bissao); *Sclat. P. Z. S.* 1864, p. 114 (Unyamuezi); *Kirk, Ibis*, 1864, p. 334 (Zambesi); *Schleg. Mus. P.-B.*, Anseres, p. 93 (part.) (1866); *Boc. Jorn. Ac. Sc. Lisb.* 1867, p. 148; *Newt. Ibis*, 1867, p. 375; *Sclat. P. Z. S.* 1868, p. 261 (Shiré River, E. Africa); *Sperling, Ibis*, 1868, p. 292 (Shiré River); *Sclat. ibid.* p. 502 (Shiré River); *Eyt. Syn. Anat.* p. 24 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 802 (1870); *Boc. Jorn. Ac. Sc. Lisb.* 1871, p. 277; *G. R. Gr. Hand-list*, iii. p. 73, n. 10553 (part?) (W. Afr., Abyss., Shiré River) (1871); *Anderss. B. Damara Land*, p. 334 (1872); *Sundev. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Boc. Jorn. Ac.*

Sc. Lisb. 1873, p. 198, 1876, p. 289; *Sclat. P. Z. S.* 1877, p. 48 (eggs); *Boc. Jorn. Ac. Sc. Lisb.* 1879, p. 153; *Sclat. P. Z. S.* 1880, p. 498 (Western and S. Africa!); *Boc. Orn. Ang.* p. 491 (1881); *Rchnw. Vög. d. Zool. Gärt.* p. 67 (1882); *Böhm, J. f. O.* 1882, p. 182 (Kakoma, E. Afr.); *Pelz. in Holub, Beitr. Orn. Südafr.* pp. 310 & foll. (skeleton, p. 311, skull, pp. 314, 317) (1882); *B. O. U. List Brit. B.* p. 114 (1883); *Sclat. List Vert. An.* 8th ed. p. 415 (West Africa, but also Shiré River) (1883); *Sharpe, Layard's B. S. Afr.* p. 746 (1884); *Fischer, Zeitschr. ges. Orn.* 1884, p. 393; *Böhm, J. f. O.* 1885, p. 38; *Fischer, ibid.* p. 115; *Saund. Yarrell's Hist. Br. B.* iv. p. 304 (1885); *Sclat. Ibis*, 1886, p. 300, f. 3 (manus); *Rchnw. J. f. O.* 1887, p. 46; *Matsch. ibid.* p. 144; *Shell. P. Z. S.* 1889, p. 371 (Tareba, Massailand); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 296 (1891); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 29, n. 37 (1894).

Plectrophanes gambensis, *Brandt, Descr. et Icon. An. Ross. Nov., Aves*, fasc. i. p. 6 (1836).

Chenalopex gambensis, *Yarr. P. Z. S.* 1841, p. 70.

Plectropterus sclateri, *Sousa, Jorn. Ac. Sc. Lisb.* ii. p. 157 (Bissao, (1869); *Sclat. P. Z. S.* 1877, p. 48; *Boc. Orn. Ang.* pp. 493, 496 (1881) (=gambensis).

Plectropterus gambensis, part., *Heugl. Orn. N.O.-Afr.* ii. p. 1275 (1873).

? Plectropterus rüppellii, *Hartert, J. f. O.* 1886, p. 611 (Niger-Benué).

Adult male. Upper parts metallic black, with green and purple gloss; neck rather browner; breast and sides black; sides of the head, throat, smaller upper wing-coverts, abdomen, thighs, and under tail-coverts white; quills and tail-feathers black, with green and purple lustre: frontal knob, bare forehead, and bill coral-red; naked part of cheeks grey; nail of the bill white; feet flesh-colour; irides hazel (*specimen living in the Zool. Gard. in London, since* 1890). Total length about 38 inches, wing 17–20, tail 7·9, bill 3–3·5, tarsus 3–4·4.

The forehead is more or less prominent, and in very old birds shows a distinct frontal knob; again in the older birds the cheeks become more and more naked, and also in some a small and irregular naked space appears on the sides of the neck (*Bocage*); according to Dr. Böhm (J. f. O. 1882, p. 182), there is much individual variation as regards the size of the frontal knob and the naked spaces on the sides of the neck.

Female. Similar to the male, but smaller, and the naked part of the cheeks less extended (*Bocage*).

A female in the Zoological Gardens in London, acquired in 1890 and still living, is smaller than the male, has no frontal knob, and the forehead feathered; the feathers of the cheeks are white, as in the male.

The *young birds* have the cheeks and the forehead entirely feathered.

Young in down. Pale yellowish, with the upper parts pale brown, two yellowish spots on the back at the base of the wings, and two

others on the sides of the rump; sides of the head yellowish; throat white.

Hab. Western Africa and across to the East, from Masai-land to the Zambesi.

a. Ad. st.	Africa.	
b. Imm. st.	W. Africa.	Capt. Sabine [P.].
c. Pull. st.	W. Africa.	Purchased.
d. Imm. sk.	Accra (*J. Smith*).	Shelley Coll.
e, f. Imm. sk.	R. Niger.	Dr. Baikie [C.].
g. ♂ ad. sk.	Cunene, Angola, April (*Anchieta*).	Prof. Barboza du Bocage [P.].
h. [♂?] ad. sk.*	Tareba, E. Afr. (Massai-land).	H. C. V. Hunter, Esq. [P.].
i. ♀ ad. sk.	Lake Scherwa, Nyassa-land, May.	H. H. Johnston, Esq. [P.].
k. ♂ pull. sk.	Nyassa-land, May.	H. H. Johnston, Esq. [P.].
l. ♂ ad. sk.*	River Shiré.	Sir J. Kirk [C.].
m. [♀?] ad. sk.	Zambesi.	Sir J. Kirk [C.].
n. Skeleton (head fig. P. Z. S. 1860, p. 39, f. 1).		
o. Skeleton.		Salvin-Godman Coll.

3. Plectropterus niger.

Plectropterus gambensis, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 126, specim. *d* (Cape) (1844); *Layard, B. S. Afr.* p. 346 (descr. Zambesi) (1867); ? *Chapm. Trav. in S. Afr.*, App. p. 422 (1868); *Butl., Feild., & Reid, Zoolog.* 1882, p. 426 (Natal); *Holub, Beitr. Orn. Südafr.* p. 310 (1882).

Anser gariepensis, *Ecklon, MS. in Mus. Vindob., fide Heugl. Orn. N.O.-Afr.* ii. p. 1277 (1873) (nom. nud.); *Pelz. Beitr. Orn. Südafr.* p. 321 (1882).

Plectropterus niger, *Sclat. P. Z. S.* 1877, p. 47, pl. vii. (Zanzibar!)†; *Trimen, P. Z. S.* 1879, p. 5; *Sclat. P. Z. S.* 1880, p. 498 (Zanzibar, coast of Africa); *Rchnw. Vög. d. Zool. Gärt.* p. 68 (1882); *Sclat. List Vert. An.* 8th ed. p. 416, n. 943 (E. Africa!) (1883); *id. P. Z. S.* 1893, p. 614 (Zool. Gard. Cologne).

Similar to *P. rüppelli* and *P. gambensis*, but has no prominent frontal knob, and no bare spaces on the sides of the neck (?); no white on the throat, which is black like the rest of the neck; sides of the body extensively black; the white colour of the body in front is confined to a small space in the mesial line of the lower abdomen; under tail-coverts mostly black: "bill bright red, with the tip whitish; the iris black; the legs and feet of a duller red" (*Sclater*); according to Ayres, "iris dark umber-brown; bill bright crimson, tip pale flesh-colour; tarsus and feet dingy pale." Total length about 38 inches, wing 20, tail 9, bill from gape 3·7, tarsus 5.

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* Both specimens have the naked skin of the forehead furnished with caruncles.

† As the type of *P. niger* agrees with specimens from Natal and Potchefstroom, I doubt whether it came from Zanzibar, especially as between this place and Natal, in the Zambesi region, another species is found.

Hab. Zanzibar, according to Sclater, but probably confined to Transvaal, Natal, and South Africa.

a. ♂ ad. sk.	Potchefstroom, July (*T. Ayres*).	J. H. Gurney, Esq. [P.].
b. ♂ imm. sk.	Transvaal.	J. H. Gurney, Esq. [P.].
c. ♂ ad. sk.	[Zanzibar] died Aug.	Zool. Soc. (Type of species.)
d. ♀ ad. sk.	In captivity.	Hon. Miss Rose Hubbard [P.].
e. Juv. st.	Cape of Good Hope.	South African Museum [P.].

4. Plectropterus scioanus.

Plectropterus niger, *Salvad.* (*nec Sclat.*?) *Ann. Mus. Civ. Gen.* (2) i. p. 238 (Shoa) (1884), vi. p. 318 (Shoa) (1888).
Plectropterus scioanus, *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 239 (Shoa) (1884), vi. p. 319 (Shoa) (1888).

Similar to *P. niger*, having black throat and cheeks, no bare spaces on the sides of the neck, or seldom a very small one, and the under tail-coverts mostly black, but has a small frontal knob, covered, like the skin of the forehead, with many caruncles; size large, as in *P. niger*.
Hab. Shoa.

6. CAIRINA.

	Type.
Cairina, *Fleming, Phil. of Zool.* ii. p. 260 (1822)	C. moschata.
Moschatus (subgenus), *Less. Man. d'Orn.* ii. p. 416 (1828)	C. moschata.
Gymnathus (subgenus), *Nuttall, Man. Orn.* ii. p. 403 (1834)	C. moschata.
Carina, *Eyton, Mon. Anat.* pp. 47, 142 (1838).	
Hyonetta, *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1873)	C. moschata.
Moscha, "*Leach*," *fide G. R. Gr. Hand-list*, iii. p. 85 (1871).	

Range. Tropical America.

1. Cairina moschata.

Anas sylvestris, *Marcgr. Hist. Nat. Bras.* p. 213.
Anas cairina, *Aldrov. Orn.* iii. p. 199, t. 200, 201.
Anas moschata, *Linn. S. N.* i. p. 199, n. 16 (1766); *Gm. S. N.* i. 2, p. 515, n. 16 (1788); *Lath. Ind. Orn.* ii. p. 846, n. 37 (1790); *Bonn. Enc. Méth.* i. p. 124, pl. 34. f. 1 (1790); *Lath. Tr. Linn. Soc.* iv. p. 113, pl. xiv. ff. 1, 2, xvii. ff. 5, 6 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 258 (Caspian Coasts) (1811); *Vieill. N. D.* v. p. 129 (1816); *Dum. Dict. Sc. Nat.* vi. p. 350 (1817); *Wied, Reise Bras.* i. pp. 51, 163, 206, 262, 326, 327 (1820); *Licht. Verz.*

Doubl. p. 84 (Brazil) (1823); *Ranz. El. di Zool.* iii. 9, p. 103 (1826); *Yarrell, Tr. Linn. Soc.* xv. p. 390, pl. xv. f. *a* (trachea) (1826); *Less. Man. d'Orn.* ii. p. 416 (1828); *id. Tr. d'Orn.* p. 633 (1831); *Wied, Beitr.* iv. p. 910 (Brazil) (1832); *Nordm. in Démid. Voy.* iii. p. 290 (1840); *Schleg. Rev. Crit.* p. 107 (1844); *Degl. Orn. Eur.* ii. p. 421 (1849); *Schleg. Mus. P.-B.*, Anseres, p. 73 (1866); *Gieb. Thes. Orn.* i. p. 357 (1872).

Branta moschata, *Scop. Ann. I. Hist. Nat.* p. 68, n. 85 (1769).

Anas indica, *Ger. Orn.* v. pls. 568, 569 (1776).

Anas regia, *Mol. Sagg. Stor. Nat. Chili*, p. 234 (1782); *Gm. S. N.* i. 2, p. 508, n. 61 (1788); *Lath. Ind. Orn.* ii. p. 847, n. 39 (1790); *Bonn. Enc. Méth.* i. p. 125 (1790); *Vieill. N. D.* v. p. 137 (1816); *Dum. Dict. Sc. Nat.* vi. p. 352 (1817).

Canard musqué, *D'Aubent. Pl. Enl.* 989 (17—?); *Buff. Hist. Nat. Ois.* ix. p. 162, pl. 9 (1783).

Muscovy Duck, *Lath. Syn.* iii. 2, p. 476, n. 31 (1785); *id. Suppl.* ii. p. 348 (1801).

Anas merianæ, *Shaw, Nat. Misc.* ii. pl. 69 (1791).

Pato grande ó real, *D'Azar. Apunt.* iii. p. 410, n. 427 (1805).

Grand Canard, *D'Azar. Voy.* (*Sonn. ed.*) iv. p. 327 (1809).

Cairina moschata, *Flem. Phil. of Zool.* ii. p. 260 (1822); *id. Brit. Anim.* p. 122 (1828); *Jen. Man.* p. 230 (1835); *K. & B. Wirbelth. Eur.* pp. lxxxv, 227 (Caspian Sea) (1840); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Tsch. Wiegm. Arch.* 1844, i. p. 315 (Peru) (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 140 (1844); *id. Gen. B.* iii. p. 618 (1845); *Rchnb. Syn. Av.*, Natatores, t. 95. ff. 196–197, 198, 930 (domestica) (1845); *Tsch. Faun. Per., Aves*, p. 54 (1845–46); *Gosse, B. Jam.* p. 408 (1847); *Hartl. Ind. Azar. Apunt.* p. 27, n. 427 (1847); *Cab. in Schomb. Reise Guian.* iii. p. 763 (1848); *Rchnb. Av. Syst. Nat.* p. x (1852); *Wied, Naumannia*, 1852, 2, p. 54 (Cuba); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 41 (1856); *Burm. Syst. Ueb. Thiere Bras.* iii. sp. 440 (1856); *Moore, P. Z. S.* 1859, p. 65 (Honduras); *Sclat. & Salv. Ibis*, 1859, p. 232 (Centr. Am.); *Tayl. Ibis*, 1860, p. 315 (Honduras); *Burm. J. f. O.* 1860, p. 266 (Paraná, Tucuman); *id. La-Plata Reise*, ii. p. 514 (1861); *Lawr. Ann. Lyc. N. Y.* 1863, p. 13 (New Granada); *Sclat. & Salv. P. Z. S.* 1864, p. 373 (Panama); *Salv. Ibis*, 1865, p. 198 (Guatemala); *Pelz Reise Novara, Vög.* p. 139 (1865); *Léot. Ois. Trinid.* p. 521 (1866); *Sclat. & Salv. P. Z. S.* 1866, p. 200 (Upper Ucayali), 1867, p. 979 (Pebas); *Frantz. J. f. O.* 1869, p. 378 (Costa Rica); *Reinh. Vidensk. Meddel. Forh.* 1870, p. 21 (Brazil); *Pelz. Orn. Bras.* pp. 320, 460, lix (1870); *G. R. Gr. Hand-list*, iii. p. 85, n. 10682 (1871); *Burm. P. Z. S.* 1872, p. 367 (Paraná, Santa Fé, Tucuman); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mazatlan) (1874); *Salv. & Sclat. P. Z. S.* 1876, p. 378; *Fisch. & Rchnw. J. f. O.* 1878, p. 248; *Sclat. P. Z. S.* 1880, p. 511; *Rchnw. Orn. Centralbl.* 1882, p. 21; *White, P. Z. S.* 1882, p. 625 (Salta); *Sclat. List Vert. An.* 8th ed. p. 430 (1883); *B., B., & R. Water-B. N. Am.* i. p. 494 (note) (1884); *Radde, Ornis Caucas.* p. 452 (1884); *Berl. & Ihering, Zeitschr. ges. Orn.* 1885, p. 175 (Taquara); *Tacz. Orn. Pér.* ii. p. 472 (1886); *Berl. J. f. O.* 1887, pp. 33, 124; *Ridgw. Man. N. Am. B.* p. 100 (1887); *Sclat. Argent. Orn.* ii. p. 129 (1889); *Hartert, Kat. Vogelsamml.* p. 229 (1891); *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. p. 298 (1891); *Richm. Pr. U.S. Nat. Mus.* xvi. p. 531 (1893); *Chapm. Bull. Am. Mus. N. H.* 1894, p. 82 (Trinidad).

Cairina sylvestris, *Steph. Gen. Zool.* xii. 2, p. 79, pl. 46 (1824).
? Cairina regia, *Steph. op. cit.* p. 82 (1824).
Anas (Gymnathus) moschata, *Nutt. Man. Orn.* ii. p. 403 (1834).
Anser moschata, *D'Orb. Voy.* i. p. 108 (1835).
Carina moschata, *Eyton, Mon. Anat.* p. 142, pl. 1. ff. 5, 6 (trachea), pl. 3. f. 8 (sternum) (1838); *id. Syn. Anat.* p. 100 (1869).
Hyonetta moschata, *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872); *Coues, B. N.-West*, p. 559 (1874); *Rchnw. Vög. d. Zool. Gärt.* p. 56 (1882); *Fischer, J. f. O.* 1885, p. 115 (domestic, E. Africa); *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 345 (1890).
Hyonetta sylvestris, *Heine & Rchnw. l. c.* (Brit. Guiana) (1890).

Hybrids.

Anas bicolor, *Donovan* (*nec Vieill.*), *Br. B.* ix. pl. 212 (1818) (= A. boschas × C. moschata).
Anas moschata × A. boschas, *Licht. Verz. Doubl.* p. 84, n. 868 (1823).
Anas purpureo-viridis, *Schinz, Neue Schweiz. Denkschr.* i. p. 126, n. 1, pl. — (1837); *id. Europ. Faun.* p. 421 (1840); *Selys, Faun. Belg.* p. 140, n. 242 (1842); *Schleg. Rev. Crit.* p. 108 (1844).
Anas æneo-rufa, *Schinz* (!), *Bp. Atti Riun. Sc. Ital. Firenze*, 1841, p. 318 (= A. boschas × C. moschata).
Anas maxima, *Gosse, B. Jam.* p. 399 (1847) (=? A. boschas × C. moschata); *id. Jam. Ill.* pl. cx. (1849); *Rchnb. Syn. Av.*, Natatores, t. 87. f. 2555 (1850) (*ex Gosse*); *Lawr. Ann. Lyc. N. Y.* viii. (1866) p. 296 (Long Island) (1867).
Fuligula viola, *Bell, Ann. Lyc. N. Y.* v. p. 219 (1852) (= A. boschas × C. moschata); *id. J. f. O.* 1855, p. 59.
Anas viridi-æenea, *Aliq., fide Bp. Compt. Rend.* xliii. p. 649 (1856).
Anas iopareia, *Phil. Arch. Naturg.* 1860, i. p. 24; *Sclat. P. Z. S.* 1867, pp. 335, 340, 1868, p. 531 (= A. boschas × C. moschata).
Cairina moschata × Anas boschas, *Leverk. J. f. O.* 1890, pp. 220, 221; *Hartert, Kat. Vogelsamml.* p. 329, n. 3393 (1891).
Cairina moschata ♂ × Tadorna vulpanser ♀, *Leverk. l. c.* p. 220.
Cairina moschata ♀ × Anser cinereus ♂, *Leverk. J. f. O.* 1890, p. 221.
Cairina moschata ♀ × Anas clypeata ♂, *Leverk. l. c.*
Cairina moschata ♀ × Tadorna ægyptiaca ♂, *Leverk. l. c.*

Adult male. Head, crest, neck, and lower parts brown-black; lower hind neck and back dark green with a purple gloss, each feather margined with black; scapulars, tertials, upper tail-coverts, and tail glossy dark green; upper and under wing-coverts, like the axillaries, white; primaries glossy black; secondaries metallic green, with a bluish lustre; sides black, with a green gloss: bill varied with blackish and pinkish white, but the caruncles on the forehead and around the naked periocular skin bright pinkish red; feet black; iris brown-yellow. Total length about 29 inches, wing 14·5, tail 7·5, culmen 2·5, tarsus 2·3.

Female. Similar to the male, but much smaller, and with no caruncles on the head. Total length about 25 inches, wing 12·5, tail 5·5, culmen 2·1, tarsus 1·8.

Immature birds are less glossy and have the wing-coverts brown-black.

Young. Similar to the immature bird, but each feather of the underparts has a subapical brown spot and the margins whitish tinged with ochreous.

Hab. Tropical America from Mexico to Paraguay.

a. ♂ ad. sk.	Presidio, Mexico, March (*A. Forrer*).	Salvin-Godman Coll.
b. Ad. sk.	Cozumel I., Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
c, d. ♂ ♀ ad. sk.	Huamuchal, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
e. ♂ ad. st.	S. America.	Purchased.
f. ♂ ad. st.	S. America.	Sir E. Belcher [P.].
g. Ad. sk.	S. America.	Purchased.
h. ♂ ad. st.	Brazil.	Lord Stuart de Rothsay [P.].
i. Imm. st.	British Guiana.	Sir R. Schomburgk [P.].
k. ♂ imm. sk.	Roraima, Brit. Guiana, May (*H. Whitely*).	Salvin-Godman Coll.
l–o. ♂ ad., imm., et juv. sk.	Pastaza, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Pebas, E. Peru (*J. Hauxwell*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Upper Ucayali, July (*E. Bartlett*).	H. J. Elwes, Esq. [P.].
r. ♂ ad. sk.	Rio Paraná, Sept.	H. Durnford, Esq. [P.].
s. Skeleton.		Zool. Soc.
t. Skeleton.		

HYBRIDS.

Cairina moschata × *Anas boscas.*

u. Ad. st.	Jamaica.	P. H. Gosse, Esq. [C.].
v, w. ♀ ad. sk.	Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
x. Ad. st.	Amoy, China (*Swinhoe*).	C. Darwin, Esq. [P.].
y. Ad. st.	Interior of Madagascar.	Purchased.

7. SARCIDIORNIS.

Type.

Sarkidiornis, *Eyton, Mon. Anat.* p. 20 (1838) ..... S. melanonota.
Sarcidiornis, *Agass. Nomencl. Zool., Ind. Univ.* p. 331 (nom. emend.) (1846).

Range. Intertropical Regions.

Key to the Species.

a. Sides and flanks white, tinged with grey ..... *melanonota*, p. 54.
b. Sides and flanks broadly brown-black..... *carunculata*, p. 59.

1. Sarcidiornis melanonota.

Asia.

Anser melanotus, *Penn. Ind. Zool.* p. 12, pl. xi. (1769); *A. Newt. Str. Feath.* viii. p. 415 (1879).

Anser melanonotus, *Penn. in Forst. Ind. Zool.* (2nd ed.?) p. 21, pl. xi. (Ceylon and Madagascar) (1781).
Oie de la côte de Coromandel, *D'Aubent. Pl. Enl.* 937.
Oie bronzée, *Buff. Hist. Nat. Ois.* ix. p. 77 (Coromandel et Madagascar) (1783).
Anas tricolor, *Bodd. Tabl. Pl. Enl.* p. 56, n. 937 (1783).
Anas melanotos, *Gm. S. N.* i. 2, p. 503, n. 52 (Coromandel, Ceylon, Madagascar) (1788); *Shaw, Nat. Misc.* xi. pl. 421 (1800).
Black-backed Goose, *Lath. Syn.* iii. 2, p. 449, n. 13 (1785); *id. Suppl.* p. 272 (1787); *id. Gen. Hist.* x. p. 240 (1824).
Anas melanonotos, *Lath. Ind. Orn.* ii. p. 839, n. 18 (1790).
Anser melanotos, *Bonn. Enc. Méth.* i. p. 115, pl. 29. f. 4 (1790); *Penn. Ind. Zool.* (3rd ed.?) p. 50, pl. xiii. (1790–91); *Vieill. N. D.* xxxiii. p. 332 (1818); *id. Gal. d'Ois.* ii. p. 213, pl. 285 (1825); *Dum. Dict. Se. Nat.* xxxv. p. 465 (1825); *Sykes, P. Z. S.* 1831, p. 125.
Plectropterus melanotos, *Steph. Gen. Zool.* xii. 2, p. 8 (1824); *Sykes, P. Z. S.* 1832, p. 167, n. 213 (Dukhun); *Jerd. Madr. Journ.* xii. p. 219, n. 379 (1840).
Anas melanotus, part., *Less. Tr. d'Orn.* p. 628 (Bengala) (1831).
Sarkidiornis regius, part., *Eyt. Mon. Anat.* p. 102 (1838); *id. Syn. Anat.* p. 51 (1869).
Sarkidiornis regia, *Hartl.* (*nec Mol.*) *Verz. Ges. Mus.* p. 117 (Ost-Indien) (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 127 (India, Ceylon) (1844); *id. Gen. B.* iii. p. 605, n. 1 (1845); *Rchnb. Syn. Av.*, Natatores, t. 97. f. 227 (1845); *id. Av. Syst. Nat.* p. viii (1852); *Kelaart, Prodr. Cat.* p. 136 (1852); *Hartl. J. f. O.* 1854, p. 160 (Ceylon).
Sarcidiornis melanotus, *Blyth, Cat. B. Mus. A. S. B.* p. 302, n. 1763 (India and Burma) (1849); *Irby, Ibis*, 1861, p. 248 (Oudh).
? Anas melanotis, *Rchnb. Syn. Av.*, Natatores, t. 107. f. 2360 (♀) (1850).
Sarkidiornis melanonotus, *Layard, Ann. & Mag. N. H.* xiv. p. 268 (1854); *Jerd. B. of Ind.* iii. p. 785 (1864); *G. R. Gr. Hand-list*, iii. p. 73, n. 10555 (part.) (1871); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Lloyd, Ibis*, 1873, p. 419 (Kattiawar); *Anders. Ibis*, 1874, p. 220; *Hume, Nests and Eggs*, p. 636 (1875); *Legge, Ibis*, 1875, p. 407 (Ceylon); *Hume, Str. Feath.* iv. p. 192 (1875); *Butl. & Hume, Str. Feath.* iv. p. 27 (1876); *Hume & Davis. Str. Feath.* v. p. 486 (1878); *Hume, Str. Feath.* vii. p. 507 (1879).
Sarcidiornis melanota, *Bp. Compt. Rend.* xliii. p. 649, n. 38 (1856); *Garrod, P. Z. S.* 1875, p. 152, ff. 1, 2 (trachea); *Sclat. P. Z. S.* 1880, p. 534.
Anas melanota, part., *Schleg. Mus. P.-B.*, Anseres, p. 74 (India, Ceylon) (1866).
Sarcidiornis melanonotus, *Blyth, Ibis*, 1867, p. 175; *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1873); *Blyth, B. of Burma*, p. 165 (1875); *Hume, Str. Feath.* vii. p. 491 (1879); *id. Str. Feath.* viii. p. 114, n. 950 (1879); *Hume & Marsh. Game-B. of Ind.* iii. p. 92, pl. 13 (1880); *Parker, Str. Feath.* ix. p. 486 (1880); *Legge, B. Ceyl.* p. 1063 (1880); *Oates, Str. Feath.* x. p. 245 (Pegu) (1882); *Simson, Ibis*, 1882, p. 92 (E. Bengal); *Salv. Cat. B. Strickl. Coll.* p. 531 (1882); *H. Parker, Ibis*, 1883, pp. 194, 195 (Ceylon); *Swinh. & Barn. Ibis*, 1885, p. 136; *Hume, Nests & Eggs* (*Oates* ed.) iii. p. 282 (1890); *Hartert, Kat. Vogelsamml.* p. 227, n. 3371 (part.) (1891); *Munn, Ibis*, 1894, p. 72 (Calcutta).

Sarcidiornis melanonota, *Sclat. P. Z. S.* 1876, p. 694, pl. lxvii.* (India); *Wardl. Rams. Ibis*, 1877, p. 472 (Tonghoo); *Sclat. P. Z. S.* 1880, p. 510; *Rchnw. Orn. Centralbl.* 1882, p. 35; *id. Vög. d. Zool. Gärt.* p. 61 (1882); *Sclat. List Vert. An.* 8th ed. p. 427 (1883); *Oates, B. Brit. Burm.* ii. p. 275 (1883); *Tristr. Cat. Coll. B.* p. 50 (1889).

Africa.

Anser melanonotus, part., *Penn. in Forst. Ind. Zool.* p. 21 (Madagascar) (1781).

Plectropterus melanonotus, *Denh. & Clappert. Travels*, App. xxi. p. 204 (1826).

Anas melanotus, part., *Less. Tr. d'Orn.* p. 628 (Senegal) (1831); *Schleg. P. Z. S.* 1866, p. 426 (Madagascar); *Schleg. & Poll. Rech. Faun. Madag., Ois.* p. 142 (1868).

Sarkidiornis africanus, *Eyt. Mon. Anat.* p. 103 (1838); *Ayres, Ibis*, 1871, p. 266 (Transvaal).

Canard à bosse, *Sganz. Not. sur les Mamm. et sur l'Orn. de Madag.* p. 49 (*Mém. Soc. Hist. Nat. de Strasb.* iii. 1840).

Sarkidiornis melanonotus, *Rüpp. Syst. Uebers.* p. 173, n. 486 (Shoa) (1845); *Brehm, J. f. O.* 1855, p. 486; *Heugl. Syst. Uebers.* n. 681 (1856); *Hartm. J. f. O.* 1863, pp. 463, 470, 1864, p. 157; *Sharpe, in Oates' Matab. Land*, p. 327 (1881).

Sarkidiornis africana, *G. R. Gr. Gen. B.* iii. p. 605, n. 2 (1845); *Strickl. P. Z. S.* 1850, p. 221 (Kordofan); *Hartl. J. f. O.* 1855, p. 361 (Gold Coast); *id. Syst. Orn. Westafr.* p. 246 (1857); *id. J. f. O.* 1860, p. 173, 1861, p. 272; *id. Orn. Beitr. Fauna Madag.* p. 81 (1861); *Antin. Cat. Descr.* p. 112 (1864); *Vinson, Voy. Madag.* p. 308 (1865); *Verr. ibid., Ann.* p. 4 (1865); *Layard, Birds S. Afr.* p. 347 (1867); *Poll. Rev. et Mag. Zool.* 1867, p. 157; *Chapm. Travels in S. Afr.* ii., App. p. 422 (1868); *G. R. Gr. Hand-list*, iii. p. 73, n. 10556 (1871); *Barratt, Ibis*, 1876, p. 214 (Potchefstroom); *Ayres, Ibis*, 1880, p. 112 (Rustenburg); *Holub & Pelz. Beitr. Orn. Südafr.* p. 321 (1882); *Dubois, Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 189 (Tanganyika) (1886).

Sarkidiornis regia, *Hartl.* (*nec Mol.*) *Zeitung f. Zool. Zoot. u. Palæoz.* i p. 159 (Madagascar) (1848).

Sarcidiornis africana, *Strickl. Ann. & Mag. N. H.* 1852, p. 349; *Hartl. J. f. O.* 1854, p. 303; *Bp. Compt. Rend.* lxiii. p. 649, n. 37 (1856); *Sclat. P. Z. S.* 1860, p. 42; *Sclat. & Speke, P. Z. S.* 1864, p. 114 (Unyamuezi); *Blyth, Ibis*, 1867, p. 175; *Sharpe, P. Z. S.* 1870, p. 401 (Madagascar); *Bocage, Jorn. Ac. Sc. Lisb.* 1877, p. 278, 1873, pp. 199, 289, 294; *Bartl. P. Z. S.* 1875, p. 69; *Sclat. P. Z. S.* 1876, p. 695; *Trimen, P. Z. S.* 1877, p. 683; *Sclat. P. Z. S.* 1880, p. 510 (Africa, Madagascar); *Boc. Jorn. Ac. Sc. Lisb.* 1880, p. 69; *id. Orn. Angola*, p. 496 (1881); *Pelz. Verh. z.-b. Ges. Wien*, 1881, p. 155 (Centr. Afr.); *Hartl. Abh. Brem.* 1882, p. 216; *Sharpe, Layard's B. S. Afr.* p. 752 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 239 (Shoa) (1884), vi. p. 319 (1888); *Sibree, Ibis*, 1892, p. 270 (Madagascar); *Sharpe, Ibis*, 1892, p. 541 (Ukambani).

Sarcidiornis melanota, *Brehm, J. f. O.* 1854, p. 84 (Sudan).

Sarcidiornis melanotus, *Licht. Nomencl. Av.* p. 101 (Africa) (1854); *Brehm, J. f. O.* 1858, pp. 409, 410; *Heugl. J. f. O.* 1863, pp. 6, 164; *Finsch & Hartl. Vög. Ost-Afr.* p. 799 (1870); *Bocage,*

* The under tail-coverts are wrongly coloured a gamboge-yellow.

Jorn. Ac. Sc. Lisb. 1876, p. 256; *id. J. f. O.* 1876, p. 295 (Huilla, Cunene, Gambos); *Fischer, J. f. O.* 1879, p. 296; *Milne-Edw. & Grand. Ois. Madag.* p. 719, pls. 267 (♂ ad.), 268 *a*, 268 *b* (osteology) 270. f. 1 (head) (1881); *Böhm, J. f. O.* 1882, p. 180 (Kakoma), 1885, pp. 50, 54; *Fischer, J. f. O.* 1885, p. 115; *Hartert, J. f. O.* 1886, pp. 575, 611 (Niger-Benué); *Matschie, J. f. O.* 1887, p. 137 (Boga-Katani), p. 144 (Marungu); *Rchnw. J. f. O.* 1892, p. 6 (Victoria Njansa); *id. Vög. Deutsch-Ost-Afr.* p. 27 (1894).

Sarcidiornis regia, *Sclat.* (*nec Mol.*), *Ibis*, 1862, p. 284 (Natal).

Sarcidiornis africanus, *Kirk, Ibis*, 1864, p. 335 (Zambesi); *Shell. P. Z. S.* 1881, p. 601 (Melinda), 1889, p. 371 (Kilimanjaro).

Anas melanota, part., *Schleg. Mus. P.-B.*, Anseres, p. 24 (Madagascar, Africa) (1866); *Gieb. Thes. Orn.* i. p. 356 (part) (1872).

Sarcidiornis melanonotus, *Heugl. Reis. in d. Geb. d. Weiss. Nil*, p. 348 (1869); *id. Peterm. Geogr. Mitth.* 1869, p. 413; *id. Orn. N.-O. Afr.* ii. 2, p. 1280 (1873); *Rchnw. J. f. O.* 1887, p. 46 (Kagehi); *Hartert, Kat. Vogelsamml.* p. 237 (part.) (1891).

Sarkidiornis melanotus, *Anderss. B. Damara Land*, p. 335 (1872); *Shell. Ibis*, 1882, p. 367 (Molopo River).

? Sarcidiornis ruber, *Reichenb.* (errore ?), *Böhm, J. f. O.* 1886, p. 424.

Sarcidiornis melanonota, *Emin, J. f. O.* 1891, p. 339.

Adult male. Head and neck white, interspersed with metallic black feathers; crown and a band along the hind neck almost entirely black; base of the neck and lower plumage, including the under tail-coverts, white; upper back, the whole of the wings, rump, and upper tail-coverts black, glossed with green and blue, but the secondaries glossed with bronze and the scapulars with purple; lower back grey; tail umber-brown; sides and flanks tinged with grey; a black curved line on the sides of the lower neck; on the lower flanks a black band descending from the rump: "iris dark brown; bill and comb black; legs and feet dark plumbeous" (*Oates*). Total length about 30 inches, wing 15, tail 6, bill from gape 2·6, tarsus 3. The fleshy comb on the bill of the male is about 2 inches high in the breeding-season, and very small and inconspicuous at other times.

Female. Very similar to the male, but much smaller; head and neck more spotted with black; metallic gloss on the upper plumage much reduced in amount; whole rump and upper tail-coverts, as well as the lower back, grey: no fleshy comb on the upper mandible. Wing 11 to 11·5 inches.

Young. Head and neck more spotted than in the adult bird, but the dark spots and the crown brown-black; back and scapulars brown; rump and upper tail-coverts greyish brown; tail brown; underparts white, tinged with rusty.

Young in down. Upper parts greyish brown; underparts greyish white; upper part of the head brown; a whitish frontal band runs on each side of the head over the eyes; a whitish crescentic band bounds behind the brown colour of the upper part of the head; a narrow brown band starts from the ear-coverts and reaches a brown band on the hind neck; two white patches on the sides of the back, at the base of the wings, and two others on the sides of the rump; posterior edge of the wing whitish.

I have not been able to find any difference between the Indian and the African specimens.

Hab. India, Ceylon, and Burmah; Africa south of the Sahara, with Madagascar.

A. *Asiatic specimens.*

a. ♀ ad. st.	Ceylon.	Purchased.
b. ♂ ad. st.	India.	Purchased.
c. ♂ ad. sk.	Madras.	M. Cole, Esq. [P.].
d. ♂ ad. sk.	Madras.	Hume Coll.
e, f, g. ♂ ♀ ad. et imm. sk.	Deccan (*Sykes*).	India Museum [P.].
h. ♀ ad. sk.	Khandeish, Feb. (*J. Davidson*).	Hume Coll.
i. [♀] ad. sk.	Attara, Jan.	Colonel Swinhoe [P.].
k, l. ♂ ad. sk.	Seoni, Central Provinces.	Hume Coll.
m. ♂ ad. sk.	Raipur, March.	Hume Coll.
n. ♀ ad. sk.	Calcutta, Dec.	Hume Coll.
o. ♀ ad. sk.	Behar.	B. H. Hodgson, Esq.
p. ♂ ad. sk.	Delhi.	Hume Coll.
q. ♂ ad. sk.	Roy Bareilly, Dec.	Hume Coll.
r, s, t. ♂ ♀ ad. sk.	Etawah, Aug., Nov.	Hume Coll.
u, v. ♂ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
w, x. ♂ ad. sk.	Oudh, Jan., Feb.	Hume Coll.
y. Pull. sk.	Sikhim Terai, July.	Hume Coll.
z–c'. ♂ ♀ ad., juv., et pull. sk.	Tonghoo, July, Sept., Oct., Nov. (*R. G. W. R.*).	Tweeddale Coll.
d', e'. ♂ ♀ ad. sk.	Lower Pegu, March, Sept.	E. W. Oates, Esq. [C.].
f'. ♀ pull. sk.	Attaran R., Dec. (*W. Davison*).	Hume Coll.
g', h'. ♂ skulls.		Eyton Coll.

B. *African specimens.*

a. ♂ ad. sk.	Kordofan, July.	M. Mitchell, Esq. [P.].
b. ♂ ad. sk.	Angollalah, Shoa (*Harris*).	India Museum [P.].
c, d. ♂ ♀ ad. sk.	S.E. Africa.	Purchased.
e. ♀ ad. sk.	Kilimanjaro, June.	H. C. V. Hunter, Esq. [P.].
f. ♂ ad. sk.	Zambesi (*Bradshaw*).	Shelley Coll.
g. ♂ ad. sk.	Melinda (*Kirk*).	Shelley Coll.
h, i. ♀ ad. et juv. sk.	Potchefstroom.	F. A. Barratt, Esq. [P.].
k. ♂ juv. sk.	Rustenburg, June (*T. Ayres*).	J. H. Gurney, Esq. [P.].
l. ♀ ad. sk.	Mafane Pan, Ramaqueban R., March.	W. E. & C. G. Oates, Esqrs. [P.].
m. ♀ ad. sk.	Damara-land, Dec. (*Anderson*).	H. J. Elwes, Esq. [P.].
n. ♀ ad. st.	Gambia.	Purchased.
o. Juv. sk.	Gambia.	Eyton Coll. (One of the types of *S. africanus*, Eyton.)
p. ♂ juv. sk.	Madagascar.	Sir A. Smith [P.].
q. ♀ ad. sk.	Madagascar.	H. J. Elwes, Esq. [P.].
r. Skeleton.		

2. Sarcidiornis carunculata.

Ipecati-apoa, *Maregr. Hist. Nat. Bras.* Cap. xv. p. 217; *Licht. Abh. Ak. Berl.* 1816–17, p. 175.
Pato crestudo, *D'Azara, Apunt.* iii. p. 417, n. 428 (1805); *id. Voy.* (*Sonn. ed.*) iv. p. 331 (1809).
Anas carunculata, *Illig.* (*nec Vieill.*) *Mus. Berol.*; *Licht. Abh. Ak. Berl.* 1816–17, p. 176 (*ex D'Azara*).
Cairina? regia, *Steph. Gen. Zool.* xii. 2, p. 82 (1824).
Pato de crista, *Wied, Beitr.* iii. p. 942 (Brazil) (1832).
Sarkidiornis regius, part., *Eyt. Mon. Anat.* p. 102 (Cayenne!) (1838); *id. Syn. Anat.* p. 51 (1869).
Sarkidiornis regia, part., *G. R. Gr. List B. Br. Mus.* iii. p. 126 (1844); *id. Gen. B.* iii. p. 602, n. 1 (1845); *Hartl. Ind. Azara, Apunt.* p. 27, n. 428 (1847); *Pelz. Orn. Bras.* pp. 319, 459, lviii (Mattogrosso and Barra de Rio Negro) (1870).
Sarcidiornis regia, *Bp. Compt. Rend.* xliii. p. 649, n. 39 (1856); *Burm. J. f. O.* 1860, p. 266 (Tucuman); *id. La-Plata Reise*, ii. p. 513 (1861); *Sclat. P. Z. S.* 1867, p. 339; *Philippi, P. Z. S.* 1868, p. 532 (not Chilian); *Burm. P. Z. S.* 1872, p. 365 (Tucuman); *Bodinus, J. f. O.* 1878, p. 366 (Zool. Gard.), 1882, p. 21.
Anser melanotus, *Burm.* (*nec Penn.*) *Syst. Ueb.* iii. p. 434 (1856).
Sarcidiornis melanonota, *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (Paraguay, Guiana) (1873).
Sarcidiornis carunculata, *Sclat. & Salv. P. Z. S.* 1876, p. 377; *Sclat. ibid.* p. 695, pl. lxviii. (Maranham); *Sclat. P. Z. S.* 1880, p. 511; *Forbes, Ibis*, 1881, p. 355; *Rchnw. Orn. Centralbl.* 1882, p. 35; *id. Vög. d. Zool. Gärt.* p. 61 (1882); *Sclat. List Vert. An.* 8th ed. p. 427 (1883); *Berl. J. f. O.* 1887, p. 124; *Sclat. Argent. Orn.* ii. p. 128 (1889).

Adult. Very similar to *S. melanonota*, from which it differs principally in having the sides and flanks broadly brown-black, and the rump with no grey colour, but, like the rest of the back, black, glossed with green. The glossy-black crescent-like band on the sides of the breast is not conspicuous, being confluent with the black of the sides; the under tail-coverts are white, and not gamboge-yellow as in Mr. Sclater's plate! Total length about 24 inches, wing 14·8, tail 5, culmen 2·3, tarsus 2·6.

Female. "Much smaller than the male, and has no wattle (or comb) at all on the head" (*Forbes*).

Mr. Sclater was mistaken in believing the female to be similar to the male, as was pointed out by Mr. Forbes, who adds that "the female has little, if any, more black on the flanks than a female of *S. melanonota*."

Hab. Brazil, Paraguay, and Northern Argentina.

a, b. ♂ ad. sk. Maranham (*Zool. Soc.*). Salvin-Godman Coll.

8. ASARCORNIS.

	Type.
Asarcornis, *Salvad. MS.*	A. scutulata.

Allied to the genus *Sarcidiornis*, with which it agrees in the general shape, in the indentations of the bill, in the wedge-shaped

tail, in the conformation of the feet, but has *no comb*; the bill is somewhat larger and flatter.

Range. From Assam and Eastern Bengal to Java.

1. Asarcornis scutulata.

Anas scutulata, *S. Müll. Verh. Land- en Volkenk.* p. 159 (Java) (1839–44); *Schleg. Mus. P.-B.*, Anseres, p. 64 (Java) (1866); *Sclat. & Wolf, Zool. Sketches*, ii. pl. xlix. (1867); *Gieb. Thes. Orn.* i. p. 361 (1872); *Hume, Str. Feath.* viii. p. 158 (Kussoom) (1879); *Vorderm. N. T. N. I.* xlix. p. 419 (1889), li. p. 246 (Sumatra) (1891).

Sarcidiornis leucopterus, *Blyth, J. A. S. B.* xviii. p. 820 (Burma) (1849); *id. Cat. B. Mus. A. S. B.* p. 302, n. 1764 (1849).

Casarca leucoptera, "*Blyth*," *Jard. Contr. Orn.* 1850, p. 141, pl. 64 (Mergui); *Rchnb. Syn. Av.*, Natatores, t. 111 c. f. 2947 (*ex Jardine*) (1850); *Bp. Compt. Rend.* xliii. p. 649, n. 50 (1856); *Gould, P. Z. S.* 1859, p. 150 (Tenasserim); *Jerd. B. of Ind.* iii. p. 793 (1864); *Eyt. Syn. Anat.* p. 58 (1869); *Godwin-Aust. J. A. S. B.* xliii. p. 176 (Dinapur, Dunsuri R.) (1874); *Blyth, B. of Burma*, p. 165 (1875); *Hume & Davis. Str. Feath.* vi. p. 489 (1878); *Hume, Str. Feath.* viii. p. 170 (Kussoom) (1879).

Anas moschata, part., *Bp. Compt. Rend.* xliii. p. 549 (1856).

Casarca scutulata, *Blyth, Ibis*, 1867, p. 176 (Brahmaputra), 1870, p. 176; *Hume, Str. Feath.* viii. p. 115, n. 955 (1879).

Casarka scutellata, *Eyt. Syn. Anat.* p. 57 (1869).

Anas scutellata, *G. R. Gr. Hand-list*, iii. p. 82, n. 10645 (1871) (Mergui, Moluccas!).

Anas leucoptera, *Hume & Marsh.* (*nec Gm.*) *Game-B. of Ind.* iii. pp. 147, 172, pl. 20 (1880); *Simson, Ibis*, 1882, p. 92; *Oates, B. of Burmah*, ii. p. 281 (1883); *Hume, Nests & Eggs* (*Oates ed.*) iii. p. 287 (1890).

Tadorna scutulata, *Selat. P. Z. S.* 1880, p. 512; *Salvad. Orn. Pap. e Mol.* iii. p. 393 (1882); *Tristr. Cat. Coll. B.* p. 50 (Sumatra) (1889).

Vulpanser scutulata, *Rchnw. Orn. Centralbl.* 1882, p. 36.

Adult male (?). Head and upper part of the neck white, thickly mottled with black, as in *Sarcidiornis melanonota*; the black spots more numerous on the upper part of the head and hind neck; lower part of the neck and mantle glossy black, mixed with brown-chestnut in front, the same colour covers the breast and abdomen; under tail-coverts brown; back, rump, upper tail-coverts, and scapulars olive-brown; the feathers of the back, rump, and upper tail-coverts glossed with bluish and green; smaller upper wing-coverts white, the median ones bluish grey or lead-colour, broadly tipped with black; quills olive-brown, but secondaries with the outer web bluish grey, forming a distinct speculum; tertials olive-brown, the first one white on the outer half of the outer web, margined outwardly with black; under wing-coverts and axillaries white, the former mixed with brown feathers; tail dull brown-olive: bill ochreous red; feet reddish. Total length about 28 inches, wing 15, tail 6·5, culmen 2·5, tarsus 2·3.

Female. Similar to the male, but somewhat smaller and less

glossy on the edges of the feathers of the back and rump, and of the upper tail-coverts. Total length about 26 inches, wing 12, tail 6, culmen 2·4, tarsus 2·1.

It seems that in the East this bird is often kept in confinement, and then becomes partially albino, especially on the neck, breast, and abdomen; two of the specimens mentioned below are of this description.

The systematic position of this bird has always been a great puzzle; but I have no doubt that its nearest allies are the species of the genus *Sarcidiornis*, although it is devoid of a comb; and on this account I think that it ought to stand as the type of a distinct genus; Mr. Hume has also expressed the same opinion.

Hab. Assam, Eastern Bengal, Mergui, Malay Peninsula, Sumatra (?), and Java.

a. ♂ ad. st.	Mergui (*Blyth*).	Zool. Soc. (Figured by Mr. Wolf, Zool. Sketch. pl. 49.)
b. ♀ ad. sk.	Dollah, Assam, May.	Hume Coll.
c, d. Ad. st. (semialbino var.).	[Moluccas], probably Java.	Purchased.

9. RHODONESSA.

	Type.
Rhodonessa, *Rchnb. Av. Syst. Nat.* p. ix, Taf. 85 (1852)	R. caryophyllacea.

Range. Confined to India, Assam, and Independent Burma.

1. Rhodonessa caryophyllacea.

Pink-headed Duck, *Lath. Syn. Suppl.* i. p. 276, n. 99, pl. 119 (India) (1787); *Tweedie, Str. Feath.* vii. p. 527 (1879); *Reid, Str. Feath.* viii. p. 418 (1879).

Anas caryophyllacea, *Lath. Ind. Orn.* ii. p. 866, n. 85 (1790); *Vieill. N. D.* v. p. 162 (1816); *Dum. Diet. Sc. Nat.* vi. p. 379 (1817); *Lath. Gen. Hist.* x. p. 343, pl. 179 (1824); *Sw. An. in Menag.* p. 277 (1838); *G. R. Gr. List B. Brit. Mus.* p. 136 (1844) (Bootan, Nepal); *G. R. Gr. & Mitch. Gen. B.* iii. p. 616, n. 10, pl. 167 (1845); *Rchnb. Syn. Av.*, Natatores, t. 85. f. 919 (1845) (*ex Gray & Mitch.*); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 146 (1846); *Jerd. Ill. Ind. Orn.* pl. 34 (1847); *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1774 (1849); *Licht. Nomenel. Av.* p. 101 (Assam) (1854); *Jerd. B. of Ind.* iii. p. 800 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 62 (1866); *Gieb. Thes. Orn.* i. p. 346 (syn. emend.) (1872); *Hume, Nests & Eggs Ind. B.* p. 644 (1873); *Sclat. P. Z. S.* 1874, p. 110 (Zool. Gard.); *Blyth, B. of Burma*, p. 165 (Arakan, Bhamo) (1875); *Fairbank, Str. Feath.* iv. p. 264 (Khandala) (1876); *Davidson, Str. Feath.* vii. p. 95 (1878); *Ball, l. c.* p. 232 (Rajmehal Hills, Hazaribagh) (1878); *Hume, Str. Feath.* vii. p. 492 (1879), viii. p. 501 (1879); *Hume & Marsh. Game-B. Ind.* iii. pp. 174, 435, pl. 23 (1880); *Simson, Ibis*, 1884, p. 271 (Purneah and Maldah district); *C. Swinh. & Barn. Ibis*, 1885, p. 137 (Lake Depalpore); *Tristr. Cat. Coll. B.* p. 49 (1889) *Hartert, Kat. Vogelsamml.* p. 231 (1891).

Anas erythrocephala, *Bonn.* (*nec S. G. Gm.*) *Enc. Méth.* i. p. 143, pl. 35. f. 3 (1790).
Fuligula caryophyllacea, *Steph. Gen. Zool.* xii. 2, p. 207 (1824).
Milouin à cou rose, *Less. Tr. d'Orn.* p. 632, n. 40 (Bengala) (1831); *Pucher. Rev. et Mag. de Zool.* 1850, p. 636 (=A. caryophyllacea); *Hartl. J. f. O.* 1855, p. 420.
Callichen caryophyllaceum, *Eyt. Mon. Anat.* p. 152 (1838).
Tadorna ? caryophyllacea, *Jerd. Madr. Journ.* xii. p. 221, n. 368 (1840).
Rhodonessa caryophyllacea, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 77 (1856); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *id. Hand-list*, iii. p. 82, n. 10654 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Ball, Str. Feath.* ii. p. 438 (Chota Nagpur) (1874); *Garrod, P. Z. S.* 1875, p. 153 (trachea), f. 3 ♀, ii. 4, 5 ♂; *Hume, Str. Feath.* viii. p. 115, n. 960 (1879); *Sclat. P. Z. S.* 1880, p. 520; *Butler, Str. Feath.* ix. p. 437 (1881); *Reid, Str. Feath.* x. p. 81 (Lucknow) (1881); *Hume & Marsh. Game-Birds of Ind.* iii. pp. 173, 435, pl. 23 (1880); *Salv. Cat. B. Strickl. Coll.* p. 535 (1882); *Oates, B. Brit. Burm.* ii. p. 284 (1883); *Sclat. List Vert. An.* 8th ed. p. 432 (1883); *H. Taylor, Str. Feath.* x. p. 531 (breeding in Khorda, Orissa) (1887); *Hume, Str. Feath.* xi. p. 344 (Manipur, Sylhet, Assam) (1888); *Hume, Nests & Eggs* (*Oates ed.*), iii. p. 290 (1890).

Adult male. Head, sides of neck, and hind neck beautiful pale rosy pink, with, in the breeding-season, a small tuft of still brighter rosy on the top of the head; throat dark brown; rest of the plumage fine glossy dark chocolate-brown, paler and less glossed beneath, but under tail-coverts very dark; mantle, scapulars, breast, and sides with very fine rosy-whitish vermiculations or points; edge of the wing whitish, speculum reddish-fawn or dull salmon-colour, with a white band at the tip of the secondaries; outer web and tip of the outer primaries brown, the inner web and inner primaries buff; tertials glossy chocolate-brown, narrowly edged with black on the outer web; under wing-coverts and quills beneath pale pink colour, with a satin lustre; tail chocolate-brown: "bill reddish white, rosy at the base and faintly bluish at the tip; irides fine orange-red; legs and feet blackish, with a tinge of red" (*Jerdon*). Length about 24 inches, wing 10·5, tail 4·25, culmen 2·1, tarsus 1·6.

Female. Similar to the male, but duller and paler, and more of a smoky brown; the pink of the head is dingier and paler, and there is a broad brown medial band from forehead over crown and occiput, and (diminishing rapidly in width) on the back of the upper neck; but the most conspicuous difference is that the dull pink of the face runs on, unbroken, over the entire chin and throat, so that there is no trace of the dark band along chin and throat so conspicuous in the male: "bill pinkish brown, with the base dull white; irides dull orange; tarsi, toes, webs, and nails purplish slate" (*Shillingford*).

Young birds have the head and neck pale rose-whitish colour, with the top of the head, nape, and hind neck brown; the whole

plumage lighter brown, the underparts pale dull brown, with the edges of the feathers whitish.

Hab. Northern India, from Punjab to Nepal, and Independent Burmah, south to Madras, but Behar and the rest of Bengal, north of the Ganges and west of the Brahmaputra, are its headquarters (*Hume*).

a. Ad. st.	N. India.	Colonel Cobb [C.].
b. Juv. st.	Nepal.	B. H. Hodgson, Esq. [P.].
c. Ad. st.	Bootan.	India Museum [P.].
d. Ad. st.	Bootan (*Pemberton*).	India Museum [P.].
e. Juv. sk.	Purneah Distr. (*Fayrer*).	H. J. Elwes, Esq. [P.].
f. Ad. sk.	Calcutta, March.	Hume Coll.
g. ♀ ad. sk.	Calcutta, Jan. (*J. Anderson*).	H. J. Elwes, Esq. [P.].
h. Imm. sk.	Madras.	Hume Coll.
i. Juv. sk.	No locality (*Blyth*).	India Museum [P.].
k. Imperfect skeleton (with portion of the trachea).	Nepal.	B. H. Hodgson, Esq. [P.].

10. PTERONETTA.

	Type.
Pteronetta, *Salvad. MS.*	P. hartlaubi.

Plumage plain with no mottlings, and no metallic speculum as in *Asarcornis*, but the frontal feathers in a straight line, the lateral frontal ridges of the bill not extending backwards through the feathers of the forehead; tail graduated, but somewhat shorter. *Sexes similar.*

Range. Confined to Equatorial Africa.

1. Pteronetta hartlaubi.

Anas cyanoptera, *Temm.* (*nec Vieill.*) *in Mus. Lugd.* (Rio Boutry, *Pel*); *Hartl. J. f. O.* 1855, p. 357.

Pterocyanea cyanoptera, *Bp. Compt. Rend.* xliii. p. 659, n. 92 (1856); *Eyt. Syn. Anat.* p. 87 (1869).

Querquedula cyanoptera, *Hartl.* (*nec Vieill.*) *Orn. West-Afr.* p. 248 (1857).

Querquedula hartlaubi, *Cass. Pr. Ac. Philad.* 1859, p. 175 (Camma and Ogobai); *Heine, J. f. O.* 1860, p. 203; *G. R. Gr. Hand-list*, iii. p. 83, n. 10660 (1871); *Sharpe & Bouv. Bull. Soc. Zool. Fr.* i. p. 314 (Louemba, Chissambo) (1876); *Sclat. P. Z. S.* 1880, p. 522; *Boc. Orn. Ang.* p. 503 (1881); *Shell. P. Z. S.* 1888, p. 50 (Tingasi, Equat. Afr.); *Tristr. Cat. Coll. B.* p. 49 (1889); *Büttik. Reisebild. aus Liber.* p. , n. 230 (1890).

Anas cuprea, *Schleg. Mus. P.-B.* Anseres, p. 62 (Gold Coast, Guinea, Gaboon) (1866); *Gieb. Thes. Orn.* i. p. 349 (1872).

Querquedula (Pterocyanea) hartlaubi, *Oust. Nouv. Arch. Mus.* (2) ii. p. 122, pl. 6 (Ogoôué) (1879).

Adult male. Head and upper part of neck black; a white square patch on the frontal edge; rest of the plumage bright chestnut,

changing into chocolate olive-brown on the rump; upper wing-coverts blue; primaries brown; secondaries olive-brown, with a slight bluish tinge near the edge of the outer web; tertiaries olive-brown, edged with black on the outer web; under wing-coverts brown, washed with dull lead-blue; tail brown: "iris yellowish brown; bill black, with a broad subterminal yellow band; legs brown" (*Emin Pasha*). Total length about 22 inches, wing 11, tail 5, culmen 1·85, tarsus 1·8.

I have seen altogether seven specimens of this scarce species, and there appears to be no difference between the sexes; in some specimens the white frontal patch is wanting.

Hab. West Africa from the Gold Coast to Alima on the Congo (*Mus. Paris*), eastwards as far as Tingasi.

a. Ad. st.	Gaboon.	P. DuChaillu [C.].
b. Ad. sk.		Gould Coll.
c. ♂ ad. sk.	Tingasi, Equat. Afr., July.	Emin Pasha [C.].

11. NETTOPUS.

	Type.
Nettapus, *Brandt, Descr. et Icon. Anim. Ross. Nov.*, Aves, fasc. i. p. 5 (1836)	N. auritus.
Anserella, *Sw. Class. B.* ii. p. 189 (1837)	N. coromandelianus.
Cheniscus, *Broke, MS.* (*nec Moehr.*); *Eyt. Mon. Anat.* p. 15 (1838)	N. coromandelianus.
Microcygna, *G. R. Gr. List Gen. B.* p. 73 (1840)	N. coromandelianus.
Nettopus, *Agass. Nomencl. Zool., Ind. Univ.* p. 249 (1846).	
Cheniskus, *Agass.*	

Range. From Tropical Africa and Madagascar, through India and Malacca, to China and Eastern Australia.

Key to the Species.

a. Sides and lower part of the neck rufous; male with a large sea-green patch on the sides of the hind part of the head; female without the sea-green patch and with sides of the head white, speckled with black..... *auritus*, p. 65.

b. Sides white, with no rufous tinge.

a'. Sides with crescent-like bands; neck dark green in the male, banded with white and green in the female ..... *pulchellus*, p. 67.

b'. Sides waved with narrow grey lines; neck white: male with a broad black band across the breast; female with no broad black band across the breast, but the neck with narrow black bands all round. [p. 68.

a''. Smaller: wing 6·5 ..... *coromandelianus*,

b''. Larger: wing 7·5 ..... *albipennis*, p. 72.

1. Nettopus auritus.

Sarcelle mâle de Madagascar, *D'Aubent. Pl. Enl.* 770.
Sarcelle de Madagascar, *Buff. Hist. Nat. Ois.* ix. p. 274 (1783).
Anas aurita, *Bodd. Tabl. Pl. Enl.* p. 48, n. 770 (1783).
Madagascar Teal, *Lath. Syn.* iii. 2, p. 556, n. 94 (1785); *id. Gen. Hist.* x. p. 373 (1824).
Anas madagascariensis, *Gm. S. N.* i. 2, p. 522, n. 89 (1788); *Lath. Ind. Orn.* ii. p. 875, n. 105 (1790); *Bonn. Enc. Méth.* i. p. 159, n. 87, pl. 40. f. 2 (1791); *Vieill. N. D.* v. p. 172 (1816); *Dum. Dict. Sc. Nat.* vi. p. 397 (1817); *Licht. Verz. Doubl.* p. 85 (1823); *Vinson, in Dupré, Trois mois de séjour à Madag.* p. 262 (1863).
Bernicla madagascariensis, *Steph. Gen. Zool.* xii. 1, p. 54 (1824).
Chenalopex madagascariensis, *Less. Tr. d'Orn.* p. 627, n. 6 (1831).
Nettapus madagascariensis, *Brandt, Descr. et Icon. An. Ross. Nov., Aves*, fasc. i. p. 5 (1836); *Sganz. Ois. Madag.* p. 48 (1840); *Licht. Nomencl. Av.* p. 101 (1854); *Hartl. J. f. O.* 1854, p. 303, n. 562 (Gambia, Natal, Madagascar); *Bp. Compt. Rend.* xliii. p. 649, n. 63 (1856); *Hartl. Orn. Westafr.* p. 247, n. 699 (1857); *Gurn. Ibis*, 1859, p. 251 (Natal); *Cass. Pr. Ac. Sc. Philad.* 1859, p. 175, n. 227 (Camma); *id. J. f. O.* 1860, p. 203, n. 237 (Camma), 1861, p. 272; *Heugl. J. f. O.* 1863, p. 164; *Layard, B. S. Afr.* p. 348 (1867); *Chapm. Trav. in S. Afr.* ii. App. p. 422 (1868); *Eyt. Syn. Anat.* p. 35 (1869); *Layard, Ibis*, 1869, p. 377 (S. Africa); *Ussher, Ibis*, 1874, p. 74 (Gold Coast); ? *Rchnw. J. f. O.* 1874, p. 374 (Accra ?); *Ayres, Ibis*, 1877, p. 354 (Transvaal); *Hartert, J. f. O.* 1886, p. 612 (Niger-Benué).
Cheniscus madagascariensis, *Eyt. Mon. Anat.* p. 88 (1838).
Anser minuta, *Dubois, Orn. Gal.* p. 110, pl. 70 (1839).
Nettapus auritus, *G. R. Gr. List Gen. B.* p. 73 (1840); *id. List B. Brit. Mus.* iii. p. 128 (1844); *id. Gen. B.* iii. p. 608, n. 3 (1844); *Rchnb. Syn. Av.*, Natatores, t. 96. ff. 931, 932 (1845); *Hartl. Zeit. f. Zool. u. Zoot.* 1848, p. 159; *id. Ann. & Mag. N. H.* ii. p. 393 (1848); *Hartl. J. f. O.* 1860, p. 173; *id. Orn. Beitr. Faun. Madag.* p. 82 (1861); *Poll. N. T. D.* i. p. 327 (1863); *Roch & E. Newt. Ibis*, 1863, p. 174 (Madagascar); *E. Newt. ibid.* p. 459 (trachea); *Sclat. P. Z. S.* 1863, p. 165; *Kirk, Ibis*, 1864, p. 336 (Zambesi); *Vinson, Voy. Madag.* p. 85 (1865); *Verr. ibid.*, Ann. B, p. 4 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 75 (1866); *id. P. Z. S.* 1866, p. 426; *Schleg. & Poll. Rech. Faun. Madag.* p. 141 (1868); *Grand. Rev. et Mag. de Zool.* 1868, p. 5; *Cab. in v. d. Deck. Reis.* iii. p. 51 (1869) (E. Africa); *Finsch & Hartl. Vög. Ostafr.* p. 804 (1870); *G. R. Gr. Hand-list*, iii. p. 77, n. 10593 (1871); *Bocage, Jorn. Ac. Lisb.* no. xii. p. 278 (1871); *Anderss. B. Damara Land*, p. 336 (1872); *Bocage, Jorn. Ac. Lisb.* no. xvii. p. 45 (1874); *Gieb. Thes. Orn.* ii. p. 701 (1878); *Bartl. P. Z. S.* 1875, p. 68 (Tamatave); *Bocage, J. f. O.* 1876, p. 294 (Huilla, Cunene); *Hartl. Vög. Madag.* p. 357 (1877); *Fisch. & Rchnw. J. f. O.* 1878, p. 248; *Fisch. ibid.* p. 296, 1879, p. 285; *Boeage, Orn. Ang.* p. 498 (1881) (Angola); *Sharpe in Oates' Matab. Land*, p. 327 (1881); *Milne-Edw. & Grand. Faune Madag., Ois.* p. 714, pls. 264 (bird), 265 (skeleton), 266 (osteology), 275. f. 2 (head), 307. f. 1 (egg) (1882); *Holub & Pelz. Beitr. Orn. S.-Afr.* p. 328 (1882); *Butl., Feild. & Reid, Zool.* 1882, p. 427; *Sharpe, Layard's B. S. Afr.* p. 750 (1884); *Böhm, J. f. O.* 1885, pp. 38, 64 (C. Africa); *Fischer, ibid.* p. 115 (E. Africa); *Ayres, Ibis*, 1886, p. 297 (Transvaal); *Matschie, J. f. O.* 1887, p. 137; *Shelley, Ibis*, 1888, p. 307 (E. Africa); *Tristr. Cat. Coll. B.* p. 51

(1889); *Hartert, Kat. Vogelsamml.* p. 227, n. 3973 (1891); *Sibree, Ibis*, 1892, p. 270; *Rchnw. Vög. Deutsch. Ost-Afr.* p. 27 (1894).

Microcygna madagascariensis, *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 217 (1846) (*nec Gm.*).

? Nettapus coromandelianus, *Anderss.* (interior of S. Africa, *fide Hartl. Orn. Westafr.* p. 247); *Gurn. in Anderss. B. Damara Land*, p. 337 (note) (1872).

Nettopus madagascariensis, *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872); *Rchnw. Vög. d. Zool. Gärt.* p. 58 (1882).

Nettopus auritus, *Sclat. P. Z. S.* 1880, p. 505.

Nettapus auratus (errore), *Shelley, P. Z. S.* 1881, p. 601 (Lamu).

Anserella aurita, *Rchnw. Orn. Centralbl.* 1882, p. 22.

Adult male. Forehead, sides of the head, and a collar round the neck white; top of the head, a band along the hind neck, back, rump, upper wing-coverts, scapulars, and tertials dark glossy green; ear-coverts and sides of the nape pale yellowish white, encircled anteriorly and below by a crescentic black band; lower part of the neck all round, sides and flanks bright cinnamon; breast and abdomen white; vent and under tail-coverts black; on the lower part of the hind neck the cinnamon feathers with green-black undulated lines; upper tail-coverts with steel-blue gloss; quills and tail-feathers black; the tips of the anterior greater wing-coverts and some of the median secondaries white, forming a conspicuous speculum; under wing-coverts black: "iris dark brown; bill bright yellow [with the nail blackish]; feet black" (*E. Newton*). Total length about 11·5 inches, wing 6·1, tail 3·4, culmen 1, tarsus 0·9.

Female. Similar to the male, but duller; the white of the forehead and sides of the head dotted with black; no distinct yellowish patches on the sides of the head and no crescentic black band; the green feathers of the back and upper tail-coverts freckled with obsolete rufous lines; lower hind neck more distinctly banded with rufous: bill with "the upper mandible dusky olive, with a greenish-olive patch on the lower part of the base, and a small livid spot on each side of the nail" (*Andersson*).

Hab. Madagascar, and Africa, from Natal to the Zambesi on the east, and from Damara-land to the Senegal on the west.

a, b. ♂ ♀ ad. sk.	West Africa.	
c. ♂ ad. st.	West Africa.	Purchased.
d. ♂ ad. sk.	Lagos.	Sir A. Moloney [P.].
e. ♂ imm. sk.	Maw.	A. G. Baxter, Esq. [C.].
f, g. ♂ ♀ ad. sk.	Lamu.	F. J. Jackson, Esq. [P.].
h, i. ♂ ♀ ad. sk.	Zambesi.	Dr. Bradshaw [C.].
k–n. ♂ ad. et imm., ♀ ad. sk.	Zambesi (*Bradshaw*).	Shelley Coll.
o. ♂ ad. sk.	Zulu-land, July (*Gordge*).	Shelley Coll.
p, q. ♂ ♀ ad. sk.	Natal, Dec. (*Gueinzius*).	Purchased.
r. ♀ ad. sk.	Potchefstroom, June (*Ayres*).	J. H. Gurney, Esq. [P.].
s, t. ♂ ♀ ad. sk.	Matabele-land.	W. E. & C. G. Oates, Esqrs. [P.].

u. ♂ ad. sk.	Madagascar.	Tweeddale Coll.
v. ♂ ad. sk.	Madagascar.	Dr. R. Bowdler Sharpe [P.].
w, *x*. ♀ ad. et ♂ imm. sk.	Madagascar.	Shelley Coll.
y. Imm. sk.	Madagascar.	G. F. Scott Elliot, Esq. [P.].
z. ♂ ad. sk.	Central Madagascar.	Seebohm Coll.
a'. Skeleton.		

2. Nettopus pulchellus.

Nettapus pulchellus, *Gould, P. Z. S.* 1841, p. 89 (N. Australia); *id. B. Austr.* vii. pl. 4 (pt. vi., 1842); *G. R. Gr. Gen. B.* iii. p. 608, n. 2 (1844); *Rchnb. Syn. Av.* Natatores, t. 96. ff. 938, 939 (1844) (*ex Gould*); *Blyth, Cat. B. Mus. A. S. B.* p. 302, n. 1765 (1849); *Bp. Compt. Rend.* xliii. p. 649, n. 62 (1856); *Elsey, P. Z. S.* 1857, p. 28; *G. R. Gr. P. Z. S.* 1858, p. 198; *id. Cat. B. New Guin.* p. 63 (1859); *Finsch, Neu-Guin.* p. 183 (1865); *Gould, Handb. B. Austr.* ii. p. 357 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 97 (1866) (Amboina); *Rams. P. Z. S.* 1868, p. 388 (Queensland); *Eyt. Syn. Anat.* p. 37 (1869); *Gieb. Thes. Orn.* ii. p. 101 (1875); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 194, 386 (1876); *D'Alb. Sydn. Mail*, 1877, p. 248; *id Ann. Mus. Civ. Gen.* x. p. 20 (1877); *id. Ibis*, 1877, p. 372; *Rams. P. Z. S.* 1877, p. 346; *id. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 650 (1877); *Mast. ibid.* p. 276 ((1877); *D'Alb. & Salvad. Ann. Mus. Civ. Gen.* xiv. p. 133 (1879) (Katau and Fly Rivers); *D'Alb. Nuov. Guin.* pp. 519, 588 (1880); *Legge, B. of Ceyl.* p. 1067 (1880); *Sclat. P. Z. S.* 1883, pp. 52, 200 (Larat); *Finsch, Vög. d. Südsee*, p. 29 (1884); *Forbes, P. Z. S.* 1884, p. 434; *Blas. Zeitschr. ges. Orn.* 1886, pp. 202, 209 (Celebes); *Rams. Tab. List*, p. 22, n. 661 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889) (Port Moresby); *Salvad. Agg. Orn. Pap. e Mol.* p. 210 (1891).

Anserella pulchella, *G. R. Gr. Hand-list*, iii. p. 77, n. 10595 (1871); *Rchnw. Orn. Centralbl.* 1882, p. 22.

Nettopus pulchellus, *Sclat. P. Z. S.* 1880, p. 505; *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 400, n. 1 (1882); *id. Orn. Pap. e Mol.* iii. p. 384 (1882).

Adult male. Frontal edge, sides of the head, throat, breast, and abdomen white; top of the head brown, banded with dark green and pale brown; neck all round, back, scapulars, and upper wing-coverts dark glossy green with a bluish tinge; lower part of the neck and sides with crescentic white and dark green bands, producing a scale-like appearance; upper tail-coverts dark glossy green, irregularly banded, especially towards the base, with white; quills black; secondaries broadly tipped with white, forming a white band across the wing; under wing-coverts black glossed with green; tail glossy black; under tail-coverts black: bill black, with the nail (in dry skins) pale: feet black; "irides dark brown" (*Forbes*). Total length about 13·5 inches, wing 6·9, tail 3, culmen 0·98, tarsus 0·98.

Female. Similar to the male, but has the top of the head uniform brown-black; sides of the head and throat white, speckled with black; a black band along the middle of the hind neck; upper part of the neck white, with black bands, which lower down have a crescent-like shape; otherwise as in the male.

Immature male. Has the anterior part of the cheeks and the throat tinged with blackish, while the posterior part of the cheeks and the ear-coverts are covered by a very conspicuous white patch.

Hab. Australia, Southern New Guinea, Tenimber Islands, Moluccas, and Celebes.

a. Imm. st.		
b. ♂ ad. sk.	Australia.	Salvin-Godman Coll.
c, d. ♂ ♀ ad. st.	Port Essington.	The Earl of Derby [P.].
e. [♂] ad. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
f. ♂ ad. sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
g, h. ♂ ♀ ad. sk.	Adelaide River, N.W. Australia.	P. W. Bassett Smith, Esq. [P.]
i. ♂ ad. sk.	Pt. Albany, N.W. Australia (*Coxen*).	Tweeddale Coll.
k. ♂ ad. sk.	Pt. Moresby, S.E. New Guinea.	J. Goldie [C.].
l. ♀ ad. sk.	Larat, Tenimber Island, Aug.	H. O. Forbes, Esq. [C.].

3. Nettopus coromandelianus.

Sarcelle de Coromandel, *D'Aubent. Pl. Enl.* 949 (♂), 950 (♀); *Buff. Hist. Nat. Ois.* ix. p. 274 (1783).

Coromandel Teal, *Lath. Syn.* iii. 2, p. 556, n. 95 (1785).

Anas coromandeliana, *Gm. S. N.* i. 2, p. 522, n. 90 (1788); *Lath. Ind. Orn.* ii. p. 875, n. 106 (1790); *Veill. N. D.* v. p. 171 (1816); *Dum. Dict. Sc. Nat.* vi. p. 396 (1817).

Anas coromandelica, *Bonn. Enc. Méth.* i. p. 159, n. 86 (1791).

Bernicla coromandeliana, *Steph. Gen. Zool.* xii. 1, p. 56 (1824).

Chenalopex coromandeliana, *Less. Tr. d'Orn.* p. 627, n. 5 (1831).

Anser coromandeliana, *Sykes, P. Z. S.* 1831, p. 125.

Anas girra, *J. E. Gr. in Hardw. Ill. Ind. Zool.* pl. 68 (1832).

Anser girra, *Sykes, P. Z. S.* 1832, p. 167 (Dukhun).

Cheniscus coromandelianus, *Eyt. Mon. Anat.* p. 89 (1838).

Microcygna coromandeliana, *G. R. Gr. List Gen. B.* p. 73 (1840); *id. op. cit.* 2nd ed. p. 93 (1841); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844).

Dendrocygna? girra, *Jerd. Madr. Journ.* xii. p. 218, n. 378 (1840).

Dendrocygna affinis, *Jerd. op. cit.* p. 219, n. 378 bis (winter dress) (1840).

Nettapus coromandelianus, *G. R. Gr. List B. Brit. Mus.* iii. p. 129 (1844); *id. Gen. B.* iii. p. 608, n. 1 (part.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 96. ff. 933–35 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 144 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 302, n. 1766 (1849); *Kelaart, Prodr. Cat.* p. 136 (1852); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Layard, Ann. & Mag. N. H.* (2) xiv. p. 269 (1854); *Licht. Nomencl. Av.* p. 10 (Sumatra) (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 60 (1856); *Jerd. B. of Ind.* iii. p. 786 (1864); *Pelz. Reise Novara, Vög.* p. 136 (Manila) (1865); *Schleg. Mus. P.-B.*, Anseres, p. 76 (Java) (1866); *Blyth, Ibis*, 1867, pp. 175, 310; *Bearan, Ibis*, 1868, p. 401; *Eyt. Syn. Anat.*

p. 36 (1869); *David, N. Arch. du Mus*, *Bull.* vii. *Cat.* n. 442 (China) (1871): *Lloyd, Ibis*, 1873, p. 419 (Bullol); *Wald. Ibis*, 1874, p. 149 (Andamans); *Anders. Ibis*, 1874, p. 222 (eggs, breeding); *Blyth, B. Burm.* p. 165 (1875); *Wald. Tr. Z. S.* ix. pp. 243, 252 (1875); *Butl. Str. Feath.* iv. p. 27 (Guzerat) (1876); *Hume, ibid.*; *David & Oust. Ois. Chine*, p. 501 (1877); *Rchnw. J. f. O.* 1877, p. 218 (Celebes); *Hume & Davis. Str. Feath.* vi. p. 486 (Tenasserim) (1878); *Oates, Str. Feath.* vii. p. 52 (1878); *Cripps, ibid.* p. 311 (1878); *Tiraut, Bull. Com. Agr. & Industr. Cochinch.* i. 1 (1878), p. 161 (1879); *Legge, B. of Ceyl.* p. 1066 (1880); *Bingh. Str. Feath.* ix. p. 198 (1880); *Tweedd. Orn. Works*, pp. 269, 404, 413 (1881); *Wardl. Rams. ibid.* p. 660 (1881); *Simson, Ibis*, 1882, p. 86 (E. Bengal); *Vorderm. N. T. N. I.* xlii. p. 90 (Java) (1882); *Salv. Cat. B. Strickl. Coll.* p. 529 (1882); *Kelham, Ibis*, 1882, p. 198 (Perak); *Oates, B. Brit. Burm.* ii. p. 272 (1883); *Blas. J. f. O.* 1883, pp. 121, 122 (Celebes); *Seebh. Ibis*, 1884, p. 270 (Kiukiang, E. China); *Blas. J. f. O.* 1884, p. 220 (S.E. Borneo); *Swinh. & Barn. Ibis*, 1885, p. 137; *Grabowsky, Ornis*, 1885, p. 163; *Salvad. Ann. Mus. Civ. Gen.* (2) v. p. 622 (Tenasserim) (1888); *Everett, J. Str. Br. As. Soc.* 1889, p. 192; *Tristr. Cat. Coll. B.* p. 51 (1889); *Styan, Ibis*, 1889, p. 446; *Hume, Nests & Eggs* (*Oates' ed.*), iii. p. 280 (1890); *Styan, Ibis*, 1891, pp. 317, 328, 495 (Yangtse); *Hartert, J. f. O.* 1889, p. 436; *id. Kat. Vogelsamml.* p. 227 (1891); *De La Touche, Ibis*, 1892, p. 491 (Foochow); *Styan, Ibis*, 1893, p. 485 (Hainan); *Munn, Ibis*, 1894, p. 71 (Calcutta).

Microcygna girra, *Hodgs. Gray's Zool. Misc.* p. 88, no. 796 (1844).

Nettapus coromandelicus, *Gould, P. Z. S.* 1859, p. 150 (Tavoy); *Irby, Ibis*, 1861, p. 248 (Oudh); *Swinh. Ibis*, 1873, p. 96 (China); *Gieb. Thes. Orn.* ii. p. 701 (part.) (1875); *Hume, Nests & Eggs*, p. 638 (1875); *Hume & Marsh. Game-Birds of Ind.* iii. pl. 14 (1880); *Vorderm. N. T. N. I.* xlvi. p. 240 (1886), xlix. p. 419 (1889).

Anserella coromandelica, *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76 (1863); *id. Hand-list*, iii. p. 77, no 10594 (part.?) (1871); *Rchnw. Orn. Centralbl.* 1882, p. 22.

Anser (Nettapus) coromandelianus, *v. Mart. J. f. O.* 1866, p. 30.

Cheniscus coromandelicus, *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Anserella coromandeliana, *Holdsw. P. Z. S.* 1872, p. 479; *Legge, Ibis*, 1875, p. 407.

Nettapus kopschii, *Swinh. Ann. & Mag. N. H.* (4) xi. p. 16 (1873); *Gieb. Thes. Orn.* ii. p. 501 (1875); *Seebh. Ibis*, 1884, p. 270 (= coromandelianus).

Nettapus coromandus, *Hume, Str. Feath.* iii. p. 192 (1875).

Nettopus coromandelianus, *Blyth, B. Burma*, p. 165 (1875); *Hume, Str. Feath.* vii. p. 491 (1878), viii. p. 114, n. 451 (1879); *Hume & Marsh. Game-Birds of Ind.* iii. p. 101 (1880); *Sclat. P. Z. S.* 1880, p. 505; *Oates, Str. Feath.* x. p. 245 (Pegu) (1882).

Adult male in summer. Forehead, crown, and nape hair-brown, the former darkest; remainder of head, the whole neck, and lower plumage white; a broad collar round the neck black in front, glossy green behind; the white of the breast produced round the neck and forming another collar below the black one; back, scapulars,

rump, tertiaries, and wing-coverts deep glossy green; secondaries glossy green, broadly tipped with white; primaries dark brown on the basal halves, then white with the tip black; under wing-coverts greenish black; upper tail-coverts white, freckled with brown; under tail-coverts dark brown, mottled with white; sides of the body vermiculated with brown: "bill black; iris bright red; legs, toes, and webs black, the sides of the tarsus and toes dusky yellow; claws horny brown" (*Oates*). Total length 13 inches, wing 6·5, tail 3, culmen 0·92, tarsus 1.

Female. Forehead and a supercilium dirty white; crown and nape dark brown; lores and a line through the eyes blackish; remainder of head, the whole neck, and upper breast dull white, mottled with brown, the marks on the breast and hind neck becoming well-defined wavy lines; the lower plumage dull white, streaked and indistinctly barred with brown; the whole upper surface, wings, and tail brown, the secondaries tipped with white, and the inner primaries also more narrowly tipped with white; upper tail-coverts white, freckled with brown; under wing-coverts brown, each feather margined with white: "bill brown above, yellowish below; iris brown; legs and toes greenish yellow" (*Oates*). Size a trifle less than the male.

Male in winter. Similar to the female, but always retains the conspicuous white patch on the primaries.

Young. Similar to the female till the first spring (*Oates*).

Young in down. Upper parts, flanks, and under tail-coverts blackish brown; a broad superciliary stripe, cheeks, throat, front neck, and breast white; a brown line through the eyes; two broad white spots on each side of the back, one near the base of the wings, and the other, much longer, on the sides of the rump; feathers of the tail blackish, very long and stiff.

Hab. India, Ceylon, Andamans, Burmese Countries, China, Philippines, Sunda Islands, and Celebes.

a. ♀ ad. st.	India.	Capt. Johnstone [P.].
b, c. ♂ ad. et ♂ imm. st.	India.	Purchased.
d. ♂ imm. sk.	No locality.	E. Newman, Esq. [P.].
e. ♂ ad. sk.	Madras.	Tweeddale Coll.
f. ♂ ad. sk.	Mirzanpore, Feb. (*J. Davidson*).	Hume Coll.
g. ♀ ad. sk.	Raipur.	Hume Coll.
h–k. ♂ ad. sk.	Saugor, July, Aug.	Hume Coll.
l–n. ♂ ♀ ad. sk.	Sumbulpore, Cent. Provinces.	Hume Coll.
o. ♂ imm. sk.	Calcutta, March.	H. J. Elwes, Esq. [P.].
p. ♂ ad. sk.	Calcutta, Jan.	Hume Coll.
q, r. ♂ ♀ imm. sk.	Behar.	B. H. Hodgson, Esq. [P.].
s. ♂ ad. sk.	Purneah.	H. J. Elwes, Esq. [P.].
t. ♂ ad. sk.	Allahabad, June (*J. Cockburn*).	Hume Coll.

u, *v*. ♂ ♀ ad. sk.	Ankin, Aug. (*A. Anderson*).	Hume Coll.
w–*y*. ♂ ♀ imm. et pull. sk.	Etawah, Sept.	Hume Coll.
z–*b'*. ♂ juv. sk.	Oudh, Dec., Jan., Feb.	Hume Coll.
c'–*i'*. ♂ ♀ ad. et imm. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
k', *l'*. ♂ ♀ ad. sk.	Gondah (*S. Pinwill*).	Tweeddale Coll.
m', *n'*. ♂ imm. sk.	Rahimabad, Sept.	Hume Coll.
o', *p'*. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
q', *r'*. ♂ ♀ ad. sk.	Nepal (*Hodgson*).	India Museum [P.].
s'. ♂ ad. sk.	Darjeeling.	India Museum [P.].
t'. ♂ ad. sk.	Bootan.	India Museum [P.].
u'. ♂ ad. sk.	Nusserabad.	H. T. Bellamy, Esq. [P.].
v'. ♂ ad. sk.	Dacca.	Hume Coll.
w'. ♀ ad. sk.	Sylhet.	Tweeddale Coll.
x'. ♂ imm. sk.	Khasia Hills (*Griffiths*).	India Museum [P.].
y', *z'*. ♂ ♀ ad. sk.	Manipur, March, May (*A. O. H.*).	Hume Coll.
a''–*d''*. ♂ ♀ ad. et ♂ imm. sk.	Tonghoo, Feb., June, July (*R. G. W. R.*).	Tweeddale Coll.
e''–*g''*. ♂ ♀ ad. sk.	Yaytho, Brit. Burma, June (*R. G. W. R.*).	Tweeddale Coll.
h''–*l''*. ♂ ♀ ad. sk.	Near Rangoon.	Hume Coll.
m''–*p''*. ♂ ♀ ad. et ♀ juv. sk.	Lower Pegu, May, June, and Sept.	E. W. Oates, Esq. [C.].
q''–*t''*. ♂ ♀ ad. sk.	Thatone, Aug., Nov. (*W. Davison*).	Hume Coll.
u''–*z''*. ♀ ad. et ♂ ♀ imm. sk.	Thamban, Nov., Jan. (*W. D.*).	Hume Coll.
a^3, *b*^{3}. ♂ ♀ imm. sk.	Kaukaryit, Jan., July (*J. Darling & W. D.*).	Hume Coll.
c^3, *d*^{3}. ♂ ad. et imm. sk.	Assoon, March.	Tweeddale Coll.
e^3–*g*^{3}. ♀ ad. et ♂ imm. sk.	Amherst, Dec. (*W. D.*).	Hume Coll.
h^3. ♂ ad. sk.	Phalandoung, Dec. (*W. D.*).	Hume Coll.
i^3. ♂ juv. sk.	Near Yeaboo, Dec. (*J. D.*).	Hume Coll.
k^3. ♀ ad. sk.	Yea, Tenasserim, March (*W. D.*).	Hume Coll.
l^3, *m*^{3}. ♀ ad. et ♂ juv. sk	Tavoy, April (*W. D.*).	Hume Coll.
n^3–*p*^{3}. ♂ ♀ ad. sk.	Andamans, July, Aug. (*R. J. Wimberley*).	Hume Coll.
q^3. ♀ juv. sk.	S. Andamans, Feb. (*R. G. W. R.*).	Tweeddale Coll.
r^3, *s*^{3}. ♂ ad. sk.	Port Blair, S. Andamans, May (*R. J. W.*).	Hume Coll.
t^3, *u*^{3}. ♂ ♀ ad. sk.	Port Blair, July (*R. J. W.*).	Tweeddale Coll.
v^3, *w*^{3}. ♂ ♀ imm. sk.	Cochin China, Nov.	M. St. Pierre [P.].
x^3–*z*^{3}. ♂ ♀ ad. sk.	Kiukiang, China, Sept. (*R. Swinhoe*).	Seebohm Coll. (Types of *N. kopschi*, Swinh.)
a^4–*c*^{4}. ♀ ad. et ♂ juv. sk.	Kiukiang, Feb., Sept. (*R. Swinhoe*).	Seebohm Coll.

d^1, e^1. ♂ ♀ ad. sk.	Kiukiang, June, July.	F. W. Styan, Esq. [P.].
f^1. ♀ ad. sk.	Malacca (*Cantor*).	India Museum [P.].
g^1. ♂ nr. ad. sk.	Sarawak.	A. R. Wallace, Esq. [C.].
h^1, i^1. ♂ ad. sk.	Java (*Diard*).	Salvin-Godman Coll.
k^1. ♂ nr. ad. sk.	Manilla (*Maitland Heriot*).	Tweeddale Coll.
l^1. ♀ imm. sk.	Philippine Islands.	
m^1. ♀ imm. sk.	Menado, N. Celebes.	Tweeddale Coll.
n^1. Sternum.	Pegu.	W. E. Oates, Esq. [P.].

4. Nettopus albipennis.

Nettapus coromandelianus, *Gould* (*nec Gm.*), *B. Austr.* vii. pl. 5 (pt. vi., 1842); *G. R. Gr. Gen. B.* iii. p. 608, n. 1 (part.) (1844).

Nettapus albipennis, *Gould, B. Austr.* vii. text to pl. 5 (1842); *id. B. Austr.* i. *Introd.* p. xci (1848); *Rchnb. Syn. Av.*, Natatores, t. 96. ff. 936–37 (1845?) (*ex Gould*); *Bp. Compt. Rend.* xliii. p. 649, n. 61 (1856); *Gould, Handb. B. Austr.* ii. p. 359 (1865); *Schleg. Mus. P.-B.* Anseres, p. 77 (1866); *Blyth, Ibis*, 1866, p. 350 (note); *Finsch, Verh. z.-b. Ges. Wien*, 1872, p. 339; *Pelz. Ibis*, 1873, p. 122; *Rams. P. Z. S.* 1877, p. 346; *id. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 651 (1878); *Salv. Cat. B. Strickl. Coll.* p. 530, n. 2579 (1882); *Rams. Tab. List*, p. 22, n. 662 (1888).

Nettapus bicolor, *Less. Echo du Monde Savant*, 1844, p. 127 (New Holland).

Anserella albipennis, *G. R. Gr. Hand-list*, iii. p. 77, n. 10596 (1871); *Rchnw. Orn. Centralbl.* 1882, p. 22.

Nettapus coromandelicus, part., *Gieb. Thes. Orn.* ii. p. 701 (1875).

Nettopus albipennis, *Sclat. P. Z. S.* 1880, p. 505.

Nettapus coromandelianus albipennis, *Hartert, Kat. Vogelsamml.* p. 228, n. 3375 (1891).

Very similar to *N. coromandelianus*, from which it is doubtfully distinct, differing only in the larger size. Total length 13·5 inches, wing 7·5, tail 3·4, culmen 9, tarsus 1.

Hab. Eastern Australia, from Rockingham Bay to New South Wales (*Ramsay*).

a, *b*. ♂ ♀ ad. sk.	Australia.	Salvin-Godman Coll.
c. ♂ ad. sk.	Interior of Australia. Aug.	Sir J. Mitchell [C.].
d. ♂ ad. st.	Clarence River, N. S. W.	Sydney Museum [P.].

12. ÆX.

	Type.
Aix, *Boie, Isis*, 1828, p. 329	Æ. galericulata.
Dendronessa, *Sw. Faun. Bor.-Am., Birds*, p. 497 (1831)	Æ. galericulata.
Lampronessa, *Wagl. Isis*, 1832, p. 282	Æ. sponsa.
Aia (errore), *Eyton, Mon. Anat.* p. 35 (1838).	
Cosmonessa, *Rchnb.* (*nec Kaup*) *Av. Syst. Nat.* p. x (1852)	Æ. sponsa.
Æx, *B. O. U. List Br. B.* p. 123 (1883) (=Aix, *Boie*).	

Range. Confined to Northern America and Eastern Asia.

Key to the Species.

a. Basal portion of the upper mandible forms a very deep angle between the feathering of the forehead and that of the lores; feathers on the sides of the neck of the male normal; inner tertials somewhat broad, but with the shaft straight; under wing-coverts and axillaries white spotted with blackish both in male and female ..... *sponsa*, p. 73.

b. Base of the upper mandible forms almost a straight line from the forehead to the corner of the mouth; feathers on the sides of the neck of the male much elongated, forming a conspicuous ruff of narrow chestnut feathers striped with whitish; innermost tertial very broad and with the shaft much bent downwards; under wing-coverts and axillaries uniform brownish grey both in male and female..... *galericulata*, p. 76.

1. Æx sponsa.

Summer Duck, *Catesb. Carol.* i. p. 97, pl. 97; *Edw. Birds*, pl. 101; *Lath. Syn.* iii. 2, p. 546, n. 85 (1785).

Anas æstiva, *Briss. Orn.* vi. p. 352, pl. xxxii. f. 2 (1760).

Anas sponsa, *Linn. S. N.* i. p. 207, n. 43 (1766); *Gm. S. N.* i. 2, p. 539, n. 43 (1788); *Lath. Ind. Orn.* ii. p. 871, n. 97 (1790); *Bonn. Enc. Méth.* i. p. 130, pl. 35. f. 1 (1790); *Wils. Am. Orn.* viii. p. 97, pl. 70. f. 3 (1814); *Vieill. N. D.* v. p. 106 (1816); *Dum. Dict. Sc. Nat.* vi. p. 382 (1817); *Licht. Verz. Doubl.* p. 85 (1823); *Steph. Gen. Zool.* xii. 2, p. 96 (1824); *Bp. Obs. Wils.* n. 261 (1825); *Yarrell, P. Z. S.* 1830, p. 35 (Dorking); *Benn. Gard. & Menag. Zool. Soc., Birds*, p. 281, with figure (1831); *Less. Tr. d'Orn.* p. 634 (1831); *Nutt. Man.* ii. p. 394 (1834); *Aud. Orn. Biogr.* iii. p. 52 (1835), v. p. 618 (1839); *id. Syn.* p. 280 (1839); *Vigors, Zool. Beechey's Voy.* p. 30 (1839); *D'Orb. in La Sagra's Hist. Nat. Cuba, Ois.* p. 288 (1840); *Keys. & Blas. Wirbelth. Eur.* p. lxxxiv (1840); *Aud. B. Am.* vi. p. 271, pl. 391 (1843); *Giraud, B. Long Isl.* p. 312 (1844); *De Kay, N. Y. Zool.* ii. p. 338 (1844); *Degl. Orn. Eur.* ii. p. 440 (1849); *Wied, J. f. O.* 1859, p. 170, pl. 2. ff. 1, 2; *Schleg. Mus. P.-B.*, Anseres, p. 71 (1866); *Gieb. Thes. Orn.* i. p. 362 (1872).

Beau Canard huppé de la Caroline, *D'Aubent. Pl. Enl.* 980, 981 (♂ ♀); *Buff. Hist. Nat. Ois.* ix. p. 244 (1783).

Aix sponsa, *Boie, Isis*, 1828, p. 329, n. 3; *Bp. Comp. List*, p. 57, n. 380 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 133 (1844); *id. Gen. B.* iii. p. 614, n. 1 (1845); *Gosse, B. Jam.* p. 408 (1847); *Blyth, Cat. B. Mus. A. S. B.* p. 305, n. 1783 (1849); *Woodh. Sitgr. Rep.* p. 102 (1853); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xl. p. 664 (1854), xliii. p. 650, n. 121 (1856); *L. Brehm, Naumannia*, 1855, p. 298; *Cab. & Gundl. J. f. O.* 1857, p. 226 (Cuba); *Newb. P. R. R. Rep.* vi. p. 102 (1857); *Baird, B. N. Am.* p. 785 (1858); *id. Cat. N. Am. B.* n. 587 (1859); *A. Newt. Ibis*, 1859, p. 106; *Sclat. P. Z. S.* 1859, p. 206 (incubation); *Homcy. J. f. O.* 1859, p. 372 (Zool. Gart.); *Heerm. P. R. R. Rep.* x. pt. 6, p. 68 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 256 (1860); *Gundl. J. f. O.* 1861, p. 344; *Albr. J. f. O.* 1862,

p. 207 (Jamaica); *Hayd. Rep.* 1862, p. 176; *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Blakist. Ibis*, 1863, p. 147; *G. R. Gr. Cat. Br. B.* p. 196 (1863); *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica); *Gundl. Repert. Fis.-Nat.* i. p. 389 (1866); *Dress. Ibis*, 1866, p. 43 (Texas); *Brown, Ibis*, 1868, p. 428; *Homey. J. f. O.* 1868, p. 356; *Coues, Pr. Ess. Inst.* iii. p. 299 (1868); *Eyt. Syn. Anat.* p. 72 (1869); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Drachenf. J. f. O.* 1870, p. 150; *G. R. Gr. Hand-list*, iii. p. 80, n. 10626 (1871); *Coues, Key*, p. 288 (1872); *Sclat. & Salv. Nom. Ar. Neotrop.* p. 130 (1873); *Coues, Check-list*, n. 499 (1873); *id. Birds N.-West*, p. 571 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mexico) (1874); *Gundl. J. f. O.* 1875, p. 381 (Cuba); *Schal. J. f. O.* 1876, p. 11 (Brandenburg); *Sclat. & Salv. P. Z. S.* 1876, p. 397; *Schmidt, P. Z. S.* 1880, p. 318; *Sclat. P. Z. S.* 1880, p. 513; *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Ridgw. Nom. N. Am. B.* n. 613 (1881); *Salv. Cat. B. Strickl. Coll.* p. 532 (1882); *Coues, Check-list*, 2nd ed. p. 114, n. 719 (1882); *Tschusi en Schmidh. MT. orn. Ver. Wien*, 1884, p. 30 (Styria); *Coues, Key N. Am. B.* 2nd ed. p. 698, n. 719 (1884); *B., B., & R. Water-Birds N. Amer.* ii. p. 11, fig. p. 10 (1884); *Cory, List Birds W. I.* p. 31 (1885); *Nehrl. J. f. O.* 1885, p. 147 (Illinois); *A. O. U. Check-list N. Am. B.* p. 118, n. 114 (1886); *Ridgw. Man. N. Am. B.* p. 99 (1887); *Cory, Auk*, 1888, p. 65; *Tristr. Cat. Coll. B.* p. 50 (1889); *Evans, Ibis*, 1891, p. 73; *Hartert, Kat. Vogelsamml.* p. 229 (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 304 (1891); *Hatch, B. of Minnes.* p. 51 (1892); *Cory, B. West Ind.* p. 86 (1892).

Dendronessa sponsa, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 446 (1831); *Yarrell, P. Z. S.* 1833, p. 10 (moult); *Sw. Class. B.* ii. p. 366 (1837); *Keys. & Blas. Wirbelth. Eur.* p. 226 (1840); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Rchnb. Syn. Av.*, Natatores, t. 95. ff. 190–193 (1845); *Denny, P. Z. S.* 1847, p. 40; *Gulliv. P. Z. S.* 1875, p. 488.

Lampronessa sponsa, *Wagl. Isis*, 1832, p. 282; *Sundev. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Aia sponsa, *Eyt. Mon. Anat.* p. 120, f. 1 (trachea) (1838).

Cosmonessa sponsa, *Rchnb. Av. Syst. Nat.* p. x (1852).

Aix promissa, *Brehm, Naumannia*, 1855, p. 298, *in syn.* A. sponsæ.

Dendrocygnus sponsa, *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860).

Æx sponsa, *B. O. U. List Brit. B.* p. 123 (1883); *Sclat. List Vert. An.* 8th ed. p. 438 (1883).

Hybrids.

Aix sponsa × Fuligula ferina, *Bartl. P. Z. S.* 1861, p. 44; *Sclat. List Vert. An.* 8th ed. p. 440 (1883).

Aix sponsa × Fuligula nyroca, *Bartl. P. Z. S.* 1861, p. 44.

Aix sponsa × Anas superciliosa, *Bodin. J. f. O.* 1876, p. 341.

Anas sponsa ♂ × A. galericulata ♀, *Leverk. J. f. O.* 1890, p. 231, n. 52.

Anas sponsa ♂ × Fuligula cristata ♀, *Leverk. l. c.* n. 53.

Anas sponsa ♂ × A. domestica, *Leverk. l. c.* n. 58.

Anas sponsa ♂ × A. clypeata, *Leverk. l. c.* n. 59.

Anas sponsa ♂ × A. boschas, *Leverk. l. c.* n. 60.

Anas sponsa ♀ × A. querquedula ♂, *Leverk. l. c.* p. 232, n. 119.

Adult male. Head dark glossy green, cheeks purple; long pendent occipital crest glossy green, purple behind, and bounded above and below by two white lines, the upper one starting from the forehead and passing over the eye, the lower one starting behind the eye; a broad velvety black patch on the upper part of the sides of the neck; chin, throat, and upper fore neck white, sending off a branch between the cheeks and the black velvety patch, and another below this on the sides of the neck; hind neck and mantle dark bronze-green; back, rump, and upper tail-coverts dark bronzy green; scapulars dark velvety green, the inner ones more green on the inner web; lower fore neck and breast glossy chestnut, with triangular white spots at the tips of the feathers of the breast; on the sides of the breast a white band, edged below with a broader black one; lower breast and abdomen white; sides and flanks pale brown, vermiculated with black, the longer feathers beautifully marked at the tips with black and silky-white bands; lower flanks glossy chestnut; under tail-coverts brown; lesser wing-coverts bronze-green, the middle and greater ones silky blue, edged with velvety black; primaries silky grey on the outer web, glossy bluish-green at the tip; secondaries glossy bluish-green, with a white band at the tip; inner secondaries or tertials very broad velvety bluish-black, but the one next to the secondaries glossed with coppery red on the outer web; axillaries and under wing-coverts white, spotted with blackish, the greater ones more grey; tail above dark velvety green, below dusky: "a longitudinal space on the culmen, and tip of the bill with the nail, black; an oblong space of milk-white from nostrils to the nail; a border of gamboge-yellow following the basal outline of the bill; rest of the bill dark purplish red, deepening into scarlet just behind the nostrils; iris bright orange-red; eyelids deep vermilion; legs and feet dull chrome-yellow, the webs and joints dusky" (*Ridgway*). Total length about 19 inches, wing 9–9·50, tail 5, culmen 1·40, tarsus 1·40.

Female. Head and neck grey, glossed with green on the upper part of the head and crest; a space surrounding the eyes, chin and throat white; back, rump, and upper tail-coverts bronze-grey; scapulars and tertials also bronze-grey, but glossed with purple; breast, sides, and flanks brown-grey, with whitish spots along the middle of the feathers, broader on the sides and flanks; wings as in the male, but the inner greater wing-coverts glossed with coppery red; tail above greyish bronzy green, below dusky; lower breast, abdomen, and under tail-coverts white, the latter finely dotted with brown-grey: "bill dark plumbeous, the nail and longitudinal space on the culmen black; eyelids chrome-yellow; iris raw sienna; legs and feet yellowish brown" (*Ridgway*). Total length about 17·75 inches, wing 8·50, tail 4·5, culmen 1·30, tarsus 1·35.

Young in down. "Above deep hair-brown, darker or dove-brown on the pileum and tail; a dingy whitish bar along the posterior border of the arm-wing, and a roundish spot of the same on each side of the rump; lores, superciliary stripe, extending back nearly

to the occiput, with lateral and under parts of the head, generally bright sulphury buff, crossed by a wide stripe of blackish brown extending from the occiput forward to the eye; remaining lower parts dingy white, the sides brownish, this crossed on the flanks by an indistinct whitish bar" (*Ridgway*).

Hab. Nearctic region from the 50th parallel to the Gulf of Mexico; resident in Cuba (*Gundlach*); accidental in Jamaica and Bermudas.

a. ♂ ad. st.	North America.	E. Doubleday, Esq. [P.].
b. Pull. sk.	North America.	Gould Coll.
c, d, e. ♂ ad. et juv. sk.	British Columbia.	J. K. Lord, Esq. [P.].
f. ♂ ad. sk.	Fraser R. (*Dr. Lyall*).	Lord Odo Russell [P.].
g. ♂ ad. sk.	Ashland, Oregon, Feb.	Salvin-Godman Coll.
h. ♂ ad. sk.	San Francisco, California.	Salvin-Godman Coll.
i. Pull. sk.	Moody Co., Dakota, May (*F. T. Jencks*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Fort Dufferin, June.	N. America Boundary Comm. [P.].
l. ♂ ad. sk.	Eagle Lake, New Brunswick, May (*H. E. Dresser*).	Salvin-Godman Coll.
m. ♂ juv. sk.	Lyon's Falls, New York, Aug. (*A. J. Dayan*).	Salvin-Godman Coll.
n. ♀ ad. sk.	New Haven, Connecticut, Oct. (*A. J. D.*).	Salvin-Godman Coll.
o. ♂ ad. sk.	Elizabeth, New Jersey, April (*Merriam*).	Salvin-Godman Coll.
p. ♂ ad. st.	Princeton, Illinois, Oct.	E. S. Cameron, Esq. [P.].
q. ♂ juv. sk.	Pine, Indiana, Sept. (*E. W. Nelson*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Quantico, Virginia, Oct.	Salvin-Godman Coll.
s. ♂ ad. sk.	San Antonio, Texas, April (*H. E. Dresser*).	Salvin-Godman Coll.
t. Pull. sk.	Florida (*Merriam*).	Salvin-Godman Coll.
u. ♂ juv. sk.	Jamaica.	Purchased.
v. Pull. st.		Zoological Society.
w, x. Skeletons.		
y. Sternum.		

2. Æx galericulata.

Mandarine Duck.
Chinese Teal, *Edw. Birds*, i. p. 102, pl. 102 (1746).
Querquedula sinensis, elegans, *Edw. Birds*, i. p. 128.
Querquedula sinensis, *Briss. Orn.* vi. p. 450 (1760).
Anas galericulata, *Linn. S. N.* i. p. 206, n. 42 (1766); *Gm. S. N.* i. 2, p. 539, n. 42 (1788); *Lath. Ind. Orn.* ii. p. 871, n. 98 (1790); *Bonn. Enc. Méth.* i. p. 161, pl. 210. f. 1 (1790); *Shaw, Mus. Lev.* t. 10, t. 89 (1792–96); *Vieill. N. D.* v. p. 170 (1816); *Dum. Dict. Sc. Nat.* vi. p. 395 (1817); *Lath. Gen. Hist.* x. p. 363 (1824); *Steph. Gen. Zool.* xii. 2, p. 94, pl. 47 (1824); *Vieill. Gal. des Ois.* ii. p. 217, pl. 287 (1825); *Less. Tr. d'Orn.* p. 635 (Philippines) (1831); *Yarr. P. Z. S.* 1833, p. 10 (moult); *Bennett, Wander. in New South Wales*, ii. p. 62 (1834); *Temm. & Schleg.*

Fauna Jap., Aves, p. 127 (1850); *Schleg. Mus. P.-B.*, Anseres, p. 70 (1866); *David, N. Arch. Mus., Bull.* vii. *Cat.* n. 452 (1871); *Gieb. Thes. Orn.* i. p. 352 (1872); *Seebh. B. Japan. Emp.* p. 248 (1890).

Sarcelle de la Chine, *D'Aubent. Pl. Enl.* 805, 806 (♂ ♀); *Buff. Hist. Nat. Ois.* ix. p. 276, pl. 19 (1783).

Chinese Duck, *Lath. Syn.* iii. 2, p. 548, n. 86 (1785).

Aix galericulata, *Boie, Isis*, 1828, p. 329, n. 1; *Strickl. P. Z. S.* 1842, p. 166; *G. R. Gr. List B. Brit. Mus.* iii. p. 133 (1844); *id. Gen. B.* iii. p. 614, n. 2 (1845); *Gould, B. of Asia*, vii. pl. 69 (pt. iv., 1852); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 450, n. 122 (1856); *Sclat. P. Z. S.* 1859, p. 200 (incubation); *Homey. J. f. O.* 1859, p. 372 (Zool. Gart.); *Swinh. P. Z. S.* 1863, p. 324 (Central China); *id. Ibis*, 1866, p. 295 (Formosa!); *Przew. Voy.* n. 196 (1867); *Whitely, Ibis*, 1867, p. 207 (Hakodadi); *Eyt. Syn. Anat.* p. 71 (1869); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *G. R. Gr. Hand-list*, iii. p. 80, n. 10627 (1871); *Swinh. P. Z. S.* 1871, p. 418; *Pelz. Ibis*, 1873, p. 123; *Garr. P. Z. S.* 1873, p. 467 (carotids), p. 639 (muscles); *Swinh. Ibis*, 1875, pp. 137, 457 (Hakodadi); *Dyb. & Tacz. J. f. O.* 1875, p. 256 (Ussuri); *Tacz. J. f. O.* 1876, p. 202; *id. Bull. Soc. Zool. Fr.* ii. p. 45 (1877); *David & Oust. Ois. Chine*, p. 501 (1877); *Blak. & Pryer, Ibis*, 1878, p. 213 (Japan); *Sclat. P. Z. S.* 1880, p. 513; *Bolau, J. f. O.* 1881, p. 63, 1882, p. 340; *Blak. & Pryer, Tr. As. Soc. Japan*, x. p. 97 (1882); *Jouy, Pr. U. S. Nat. Mus.* vi. p. 318 (1883); *B., B., & R. Water-Birds N. Am.* ii p. 9 (note) (1884); *Ridgw. Man. N. Am. B.* p. 99 (1887); *Gigl. & Salvad. P. Z. S.* 1887, p. 591 (Olga Bay); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. pp. 118, 131 (1888); *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Dorries, J. f. O.* 1888, p. 92 (E. Siberia); *Tristr. Cat. Coll. B.* p. 50 (1889); *Evans, Ibis*, 1891, p. 73; *Styan, Ibis*, 1891, pp. 328, 496; *Hartert, Kat. Vogelsamml.* p. 229 (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 304 (1891); *De La Touche, Ibis*, 1892, p. 492 (China).

Cosmonessa galericulata, *Kaup, Isis*, 1829 (*fide Gould, B. of Asia*, vii. text of pl. 69).

Lampronessa galericulata, *Wagl. Isis*, 1832, p. 282; *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Dendronessa galericulata, *Sw. Anim. in Menag.* p. 233 (1837); *id. Class. B.* ii. p. 366 (1837); *Hartl. Syst. Verz. Ges. Mus.* p. 118 (1844); *Rchnb. Syn. Av.*, Natatores, t. 95. ff. 194–195 (1845).

Aia galericulata, *Eyt. Mon. Anat.* p. 119 (1838).

Anas asitori, *Temm.* (*ubi?*), *fide G. R. Gr. List B. Brit. Mus.* iii. p. 133 (*in syn.* A. galericulatæ).

Anas (Aix) galericulata, *Schrenck, Vög. Amur-Land*, p. 466 (1860); *Radde, Reis. in S.O. Sibir.* ii. p. 362 (1863).

Æx galericulata, *Sclat. List Vert. An.* 8th ed. p. 438 (1889).

Hybrids.

Anas galericulata ♂ × A. sponsa ♀, *Leverk. J. f. O.* 1890, p. 230, n. 39.

Anas galericulata ♂ × A. domestica ♀, *Leverk. l. c.* n. 40.

Adult male. Forehead glossy green, changing into purple on the crown; long occipital crest coppery red, changing into dark purple and green below; sides of the head anteriorly buff, changing into white round the eyes, from where the white extends on the sides of

the head and of the crest; lower part of the crest dark metallic green; chin and throat cinnamon; sides of the neck with long pointed feathers, of a chestnut colour, striped with whitish along the middle; back, rump, upper tail-coverts, and lesser wing-coverts hoary brown with a dull bronzy gloss; lower neck in front and on the sides glossy chestnut, bounded on the sides with five crescentic bands, three black and two white; sides, breast, abdomen, and under tail-coverts white; sides and flanks pale brown, vermiculated with black, the longer feathers with white and black crescentic bands at the tip; lower flanks tinged with glossy chestnut; scapulars bronzy greyish green, glossed with blue, the outer ones white, broadly edged with velvety black on the outer web; primaries grey on the outer web, tipped with green on the inner web; secondaries glossy bluish green, tipped with a white band; inner tertial with the shaft much bent downward, giving to the outer web a falcate form, the inner web excessively widened into a very broad chestnut fan, edged on the upper part with whitish and on the lower with velvety steel-black, the outer web of the same feather velvety steel-black; under wing-coverts brown-grey; tail brown olive-grey: "iris dark brown, with a yellowish-white outer ring; bill reddish brown, with the nail bluish flesh-colour; tarsus and toes reddish yellow; membranes blackish" (*Schrenck*). Total length about 17 inches, wing 9·4, tail 4·5, culmen 1·25, tarsus 1·35.

Female. Head, neck, and crest grey; a band at the base of the bill, round the eyes, a band starting from the eyes towards the nape, chin, throat, lower breast, abdomen, and under tail-coverts white; lower fore neck, breast, sides, and flanks brownish grey, each feather with a whitish oblong spot near the tip; upper parts and upper wing-coverts brown olive-grey; primaries brown, with the edge of the outer web grey; secondaries brown-olive, with a green lustre, broadly tipped with white; one of the tertials has the outer web partly black, glossed with bluish green; tail brown olive-grey. Size somewhat smaller than the male.

Male in summer. Resembles the female.

Nestling. "Whole of the upper surface, wings, and tail brown; under surface brownish buff; behind the eye two narrow lines of brown" (*Gould*).

Hab. Central and Southern China, Formosa and Japan; Amoorland only during the breeding-season.

a, b. ♂ ad. et juv. sk.	In captivity.	J. R. Reeves, Esq. [P.].
c. ♂ ad. st.	China.	J. R. Reeves, Esq. [P.].
d–g. ♂ ♀ ad. sk.	Shanghai, China, March, Nov. (*R. Swinhoe*).	Seebohm Coll.
h. ♀ ad. sk.	Formosa, August (*R. S.*).	Seebohm Coll.
i. ♀ ad. sk.	Japan.	Salvin-Godman Coll.
k. ♀ ad. sk.	Japan.	Leyden Museum [E.].
l. ♀ ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].

m. ♀ ad. sk.	Hakodadi, Japan, Sept. (*Blakiston*).	Seebohm Coll.
n, o, p. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
q. ♀ ad. sk.	Kamoze Village, Tsu-shima, April (*P. A. Holst*).	Seebohm Coll.
r. ♂ ad. sk.	Nii Village, Tsu-shima, Oct. (*P. A. Holst*).	Seebohm Coll.
s–v. Pull. st.		Zoological Society.
w. Pull. sk.		H. J. Elwes, Esq. [P.].
x. Pull. sk.		Gould Coll.
y. Skeleton.		

Subfamily IV. CEREOPSINÆ.

13. CEREOPSIS.

Type.

Cereopsis, *Lath. Ind. Orn. Suppl.* p. lxvii (1801).. C. novæ hollandiæ.

Range. Confined to S.E. Australia and Tasmania.

1. Cereopsis novæ hollandiæ.

Cygne cendré, *Labillard. Voy. Rech. La Pér.* i. p. 130, pl. 9 (1800).

New Holland Cereopsis, *Lath. Gen. Syn. Suppl.* ii. p. 325, pl. 138 (1801).

Cereopsis novæ hollandiæ, *Lath. Ind. Orn. Suppl.* p. lxvii (1801); *Illig. Prod.* p. 253 (1811); *Vieill. Analyse*, p. 60, gen. 234 (1816); *Temm. Man. d'Orn.* 2nd ed. *Analyse*, p. cvii (1820); *id. Pl. Col.* 206 (livr. 85, 1823); *Steph. Gen. Zool.* xii. 2, p. 67 (1824); *Boie, Isis*, 1826, p. 981; *Ranz. El. Zool.* ix. p. 292 (1826); *Less. Man. d'Orn.* ii. p. 412 (1828); *id. Tr. d'Orn.* p. 627 (1831); *Yarrell, P. Z. S.* 1830, pp. 25, 26 (anatomy); *Bennett, P. Z. S.* 1830, pp. 26, 27; *id. Gard. and Menag. Zool. Soc., Birds*, pp. 315–324 (1831); *Rep. Council Z. S.* 1831, p. 14, 1832, p. 13; *Less. Compl. de Buff., Ois.* ix. p. 523 (1837); *id. op. cit.* 2nd ed. p. 716 (1838); *Eyt. Mon. Anat.* p. 80 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 100 (1838); *Jard. & Selby, Ill. Orn.* (n. ser.) pl. 33 (1839); *Rüpp. Mus. Senckenb.* iii. p. 11 (1839); *G. R. Gr. List Gen. B.* p. 73 (1840); *id. List B. Brit. Mus.* iii. p. 126 (1844); *id. Gen. B.* iii. p. 606 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Rchnb. Syn. Av.*, Natatores, t. 96. ff. 940-941 (1845); *Gould, B. Austr.* vii. pl. 1 (pt. xxviii., 1847); *Rchnb. Av. Syst. Nat.* p. ix, tab. x. (1852); *id. J. f. O.* 1853, p. 10; *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 36 (1856); *Crisp, P. Z. S.* 1857, p. 215; *Sclat. P. Z. S.* 1859, p. 206 (incubation); *Schleg. Dierent.* p. 279, with fig. (1864); *Gould, Handb. B. Austr.* ii. p. 350 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 115 (1866); *Eyt. Suppl. to Osteol. Av.* pl. — (1869); *id. Syn. Anat.* p. 15 (1869); *Müll. P. Z. S.* 1869, p. 280; *Sclat. t. c.* p. 629 (breeding); *Hutt. Ibis*, 1870, p. 397; *G. R. Gr. Hand-list*, iii. p. 74, n. 2724 (1871); *Nathus. J. f. O.* 1871, p. 255 (egg); *Gieb. Thes. Orn.* i. p. 613 (1872); *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Hector, P. Z. S.*

1873, p. 769; *Gulliv. P. Z. S.* 1875, p. 488; *Garrod, P. Z. S.* 1876, p. 197 (lachrymal region); *Rams. Pr. Linn. Soc. N. S. W.* i. p. 194 (1876), ii. p. 200, n. 647 (1878); *Gadow, J. f. O.* 1877, p. 389 (intestin.); *Diggl. B. Austr.* ii. pl. 108 (1877?); *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. t. c.* pp. 497, 535; *Rohrw. Vög. Zool. Gärt.* p. 68 (1882); *Sclat. List Vert. An.* 8th ed. p. 417 (1883); *Helm, J. f. O.* 1884, p. 334 (muscles); *Legge, Pr. Roy. Soc. Tasm.* 1886, p. 244 (1887); *Rams. Tab. List*, p. 22, n. 658 (1888); *Evans, Ibis*, 1891, p. 71 (incubation); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 291 (1891); *Hartert, Kat. Vogelsamml.* p. 226 (1891); *Forbes, Tr. N. Zeal. Inst.* xxiv. p. 185 (1892).

Cereopsis cinereus, *Vieill. N. D.* v. p. 516 (1816); *id. Gal. des Ois.* ii. p. 211, pl. 284 (1825); *Cuv. Règn. An.* 2nd ed. i. p. 569 (1829).

Anser griseus, *Vieill. N. D.* xxiii. p. 336 (1818); *id. Enc. Méth.* i. p. 351, pl. 236. f. 1 (1823); *Bennett, P. Z. S.* 1830, p. 27.

Anas terræ leeuwin, *Riche, MS., D'Entrecast. Narrat., fide Bennett, P. Z. S.* 1830, p. 26.

Cereopsis cinerea, *Brandt, Descr. et Ic. An. Ross. Nov., Aves*, fasc. i. p. 6 (1836).

Cereopsis australis, *Sw. An. in Menag.* p. 219, f. 32 (1837); *id. Class. B.* ii. p. 366 (1837).

Adult. Crown of the head whitish, the remainder of the plumage brownish grey; some of the wing-coverts and scapulars with a spot of brownish black near the tip; the feathers of the back margined with pale brownish grey; the apical half of the primaries, the tips of the secondaries, the tail, and the under tail-coverts blackish brown: "bill black, cere lemon-yellow; irides vermilion; eyelash dark brown; legs reddish orange; toes, webs, claws, and a streak up the front of the legs black" (*Gould*). Total length 34 inches, wing 20, tail 8, bill 2, tarsus 3·6.

Female. Like the male.

Young. "They assume the plumage of the adults at an early stage, but have the greenish-yellow cere much less conspicuous" (*Gould*).

Young in down. Sides of the head and upper parts brown, underparts whitish grey; throat white; a broad white band on each side of the head, and another on each side of the back, as far as the sides of the rump.

Hab. Victoria, S. Australia, and Tasmania.

a, b. Ad. st.		Zoological Society.
c. Ad. sk.	Australia.	Salvin-Godman Coll.
d, e. Juv. st.	Port Lincoln.	Purchased.
f. Juv. st.		
g, h. Pull. st.		Zoological Society.
i, k. Pull. sk.		Gould Coll.
l. Pull. sk.		H. J. Elwes, Esq. [P.].
m. Skeleton.		
n. Skeleton.		Salvin-Godman Coll.

Apparently allied to *Cereopsis novæ hollandiæ* is the extinct *Cnemiornis calcitrans*, known only from its bones, which are found together with remains of *Dinornithidæ*.

CNEMIORNIS.

Type.

Cnemiornis, *Owen, Trans. Zool. Soc.* v. p. 396 (1865)... C. calcitrans.

1. Cnemiornis calcitrans.

Cnemiornis calcitrans, *Owen, Trans. Zool. Soc.* v. pp. 396–402, pls. lxiii.–lxvii. (1865); *Hector, Trans. N. Zeal. Inst.* vi. pp. 26–84, pls. x.–xiv. *a* (1874); *Owen, Trans. Zool. Soc.* ix. pp. 253–272, pls. xxxv.–xxxix. (1875); *id. Extinct B. of New Zeal.* pls. ci.–civ. (1879); *Lydekker, Cat. Foss. B.* p. 99 (1891).

"Skull short and massive, with beak rounded and stout. *Carina of sternum aborted.* Limb-bones short and very stout, the ulna being shorter than the humerus and having very prominent tubercles for the secondaries; cnemial crest of tibia greatly developed. No foramen between third and fourth trochleæ of tarso-metatarsus. Spines of dorsal vertebræ tall. Very considerably larger than the existing *Cereopsis novæ hollandiæ*, with the limbs relatively much stouter and shorter." (*Lydekker.*)

Hab. New Zealand.

a. Skeleton (incomplete).	Earns Clough Cave, Otago.	Capt. Fraser [P.].
b. Several bones.	Oamaru.	Dr. H. O. Forbes [E.]

Subfamily V. ANSERINÆ.

Key to the Genera.

a. Serrations on cutting-edge of upper mandible visible from outside for greater portion of the tomium; the latter decidedly sinuated or concave.
  a'. Bill very stout, its depth through base equal to much more than half the length of the culmen; colour of adults white or bluish, with primaries blackish..... 14. CHEN, p. 82.
  b'. Bill weaker and more depressed, its depth through base less than half the length of the culmen; colour of the adult never entirely white.
    a''. Bill not longer than the head..... 15. ANSER, p. 88.
    b''. Bill longer than the head and flattened towards the tip ..... 16. CYGNOPSIS, p. 107.
b. Serrations on edge of upper mandible visible only near angle of mouth; the tomium very slightly or not at all sinuated ..... 17. PHILACTE, p. 109.
c. Serrations of upper mandible not visible from outside; the tomium almost straight; bill moderate, but strong.
  c'. Webs of the feet not deeply excised .... 18. BRANTA, p. 111.
  d'. Webs of the feet deeply excised ..... 19. NESOCHEN, p. 126.

14. CHEN.

	Type.
Chen, *Boie, Isis*, 1822, p. 563	C. hyperboreus.
Chionochen, *Rchnb. Av. Syst. Nat.* p. ix (1852)	C. hyperboreus.
Exanthemops, *Elliot, B. N. Am.* ii. pl. xliv. (pt. ix., 1868)	C. rossi.

Range. Arctic Regions of Northern Hemisphere.

Key to the Species.

a. Bill very robust, the commissure widely gaping and enclosing a broad blackish space, extending from the corner of the mouth nearly to the tip of the bill; feathering at the base of the upper mandible, along each side, having a very convex outline; culmen 1·95 inches, or more (*Chen*).

a'. Plumage chiefly greyish brown; the rump (usually) and wing-coverts bluish grey ..... *cærulescens*, p. 82.

b'. Plumage of adult entirely white, except primaries and their coverts, which are grey; young greyish white, the upper parts tipped with dusky greyish.

a''. Length about 23–28 inches, wing 14·50–50, culmen 1·95–2·30, tarsus 2·80–3·50 ..... *hyperboreus*, p. 84.

b''. Length about 30–38 inches, wing 17·35–17·50, culmen 2·55–2·70, tarsus 3·15–3·50 ..... *nivalis*, p. 86.

b. Bill comparatively weak; the commissure not gaping and not enclosing a distinct blackish space; feathering at base of upper mandible, along each side, forming a nearly straight oblique line; culmen 1·70 inch or less; basal portion of upper mandible often wrinkled and warty (*Exanthemops*).. *rossi*, p. 88.

1. Chen cærulescens.

Blue-winged Goose, *Edw. Birds*, pl. 152 (Hudson Bay) (1748); *Lath. Syn.* iii. 2, p. 469, n. 28 (1785).

Anser sylvestris freti hudsonis, *Briss. Orn.* vi. p. 275 (1760).

Anas cærulescens, *Linn. S. N.* i. p. 198, n. 12 (1766); *Forst. Phil. Trans.* lxii. p. 414, 2 (1772); *Gm. S. N.* i. 2, p. 513, n. 12 (1788); *Lath. Ind. Orn.* ii. p. 836, n. 13 (1790); *Vieill. N. D.* xxiii. p. 336 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 468 (1825); ? *Bp. Compt. Rend.* xliii. p. 1024 (1856).

Oie des Esquimaux, *Buff. Hist. Nat. Ois.* ix. p. 80 (1783).

Anser cærulescens, *Bonn. Enc. Méth.* i. p. 115, n. 17 (1790); *Cass. Pr. Philad. Ac.* 1856, p. 42; *Baird, Cat. N. Am. B.* n. 564 (1859); *Barnston, Ibis*, 1860, p. 253; *Ross, Canad. Natural.* vii. p. 151 (1862); *id. Nat. Hist. Rev.* (2) ii. p. 286 (Mackenzie River) (1862); *Blakist. Ibis*, 1863, p. 140; *Bree, B. Eur.* iv. p. 132

(1863); *Schleg. Mus. P.-B.*, Anseres, p. 108 (1866); *Bryant, Pr. Bost. Soc. N. H.* xi. p. 70 (Inagua) (1866); *Lawr. Ann. Lyc. N. Y.* viii. p. 295 (1866); *Coues, Key*, p. 282 (1872); *id. Check-list*, n. 479 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 2 (1883); *Ridgw. Ann. Lyc. N. Y.* x. p. 388 (Illinois) (1874); *Coues, B. N.-West*, p. 553 (1874); *Nelson, Nutt. Orn. Club*, 1876, p. 137; *Sclat. & Salv. P. Z. S.* 1876, p. 361; *Sclat. P. Z. S.* 1880, p. 501; *Salv. Cat. B. Strickl. Coll.* p. 259, n. 2572 (1882).

Anser hyperboreus, juv., *Wils. Am. Orn.* viii. p. 89, pl. 469. f. 5 (1814); *Steph. Gen. Zool.* xii. 2, p. 33 (1824); *Less. Tr. d'Orn.* p. 628 (part.) (1831); *G. R. Gr. Gen. B.* iii. p. 607, n. 7 (part.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 97. f. 226 (media) (1845); *Baird, B. N. Am.* p. 760 (part.) (1858); *Eyt. Syn. Anat.* p. 40 (part.) (1869); *Gieb. Thes. Orn.* i. p. 371 (part.) (1872).

Anas hyperborea, part., *Temm. Man. d'Orn.* p. 525 (1815); *id. op. cit.* 2nd ed. ii. p. 816 (part.) (1820).

Anser hyperboreas, part., *Eyt. Mon. Anat.* p. 92 (1838).

Chen hyperborea, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 129, specim. *b* (1844); *Bp. Compt. Rend.* xliii. p. 648, n. 10 (1856).

Chen cærulescens, *Gundl. Repert. Fis.-Nat.* i. p. 387 (1866); *Elliot, B. N. Am.* pl. 43 (1869); *G. R. Gr. Hand-list*, iii. p. 75, n. 10571 (1871); *Gundl. J. f. O.* 1871, pp. 292, 294, 1875, p. 374 (Cuba); *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 202 (1880); *id. Nom. N. Am. B.* n. 590 (1881); *Coues, Check-list*, 2nd ed. p. 111, n. 694 (1882); *B., B., & R. Water-B. N. Am.* i. p. 436 (1884); *Ridgw. Auk*, i. p. 240 (1884); *Coues, Key N. Am. B.* p. 685 (1884); *Sclat. P. Z. S.* 1884, p. 476 (Zool. Gard., Alaska); *Nehrl. J. f. O.* 1885, p. 146 (Illinois); *A. O. U. Code of Nomencl. & Check-list N. Am. B.* p. 351 (1886); *Ridgw. Man. N. Am. B.* p. 115 (1887); *A. O. U. Suppl. to Code of Nom. & Check-list*, p. 18, n. 169 (1889); *Hartert, Kat. VogelsammL.* p. 226, n. 3354 (1891).

Adult. Head and upper half of the neck white, or mostly white; lower neck and body greyish brown, the feathers bordered terminally with paler; these pale edgings, however, nearly obsolete on the neck, where the tint is darker, inclining to plumbeous-umber, which joins irregularly against the white above it; rump and wings plain pearl-grey or bluish cinereous (the former sometimes white), in striking contrast to the deep greyish brown of the scapulars, sides, &c., that of the rump fading into white on the upper tail-coverts, and that of the greater coverts edged externally with the same; primaries black, fading basally into hoary grey; secondaries deep black, narrowly skirted with white; tail deep cinereous, the feathers distinctly bordered with white: bill reddish, the commissural space black; feet reddish. Total length about 30 inches, wing 15–17, culmen 2·10–2·30, tarsus 3–3·30.

Young. Very similar to the adult, but the chin only white, the colour of the head and neck being uniform plumbeous-umber, or brownish plumbeous, like the breast, only darker in shade; body more cinereous than in the adult, the pale tips to the nearly truncated contour-feathers being obsolete; rump, wings, and tail as in the adult: bill and feet blackish.

Hab. Interior of North America east of the Rocky Mountains,

breeding on the eastern shores of Hudson's Bay; migrating south in winter, through the Mississippi Valley to the Gulf Coast; occasional on Atlantic coast (*Ridgway*), in Bahama (*Bryant*), and Cuba (*Gundlach*).

a. Ad. st.	N. America.	
b. Ad. sk.	N. America.	H. J. Elwes, Esq. [P.].
c. Juv. st.	Repulse Bay, N. Hudson's Bay.	Dr. Rae [P.].
d. ♀ ad. sk.	Corpus Christi, Texas, Oct. (*F. B. Armstrong*).	Salvin-Godman Coll.

2. Chen hyperboreus.

? Anser grandinis, *Schwenck*, *Av. Sil.* p. 213 (Silesia).

? Anser niveus, *Briss. Orn.* vi. p. 288 (1760) (*ex Schwenck*).

Anser hyperboreus, *Pall. Spic. Zool.* vi. p. 25 (1767); *id. Zoogr. Rosso-As.* ii. p. 227, t. 65 (1811) (syn. emend.); *Vieill. N. D.* xxiii. p. 338 (part.) (1818); *Steph. Gen. Zool.* xii. 2, p. 33 (part.) (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 467 (part.) (1825); *Temm. Man.* iv. p. 516 (Japan) (1840); *K. & B. Wirbelth. Eur.* pp. lxxxiii, 223 (part.) (1840); ? *Naum. Vög. Deutschl.* xi. p. 213 (part.), pl. 381 (1842); *Schleg. Rev. Crit.* p. cix (1844); *G. R. Gr. Gen. B.* iii. p. 607, n. 7 (part.) (1844); ? *v. d. Mühle, Beitr. Orn. Griechenl.* p. 119 (Greece!) (1844); *Rchnb. Syn. Av.*, Natatores, t. 97. ff. 224–25 (1845); *Hartl. Wiegm. Arch.* 1852, i. p. 122 (1852); *Wallengr. Naumannia*, 1857, p. 268; ? *Cab. J. f. O.* 1857, p. 225 (Cuba); *Newb. P. R. R. Rep.* vi. p. 101 (California); (1857); *Baird, B. N. Am.* p. 760 (part.) (1858); *id. Cat. N. Am. B.* n. 563 (part.) (1859); *Heerm. P. R. R. Rep.* x. p. 69 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 249 (1860); *Ross, Canad. Natur.* vii. p. 151 (Mackenzie R.) (1862); *id. Nat. Hist. Rev.* (2) ii. p. 286 (1862); *Blakist. Ibis*, 1863, p. 139; *Swinh. P. Z. S.* 1863, p. 323 (China); *March, Pr. Ac. Philad.* 1864, p. 70 (Jamaica); *Dress. Ibis*, 1866, p. 98 (Texas); *Schleg. Mus. P.-B.*, Anseres, p. 107 (part.) (1866) (Japan, Chili!); *Lawr. Ann. Lyc. N. Y.* viii. p. 295 (1866); *Coues, Pr. Ac. Philad.* 1866, p. 98 (Arizona); *id. Pr. Bost. Soc.* xii. p. 123 (S. Carolina) (1868); ? *Turnb. B. E. Pa.* 1869, p. 34; *Dall & Bann. Tr. Chic. Acad.* i. p. 294 (Alaska, breeding) (1869); *Bann. Pr. Ac. Philad.* 1870, p. 131; *Mayn. Guide*, 1870, p. 147; *Allen, Bull. M. C. Z.* iii. p. 183 (Utah) (1872); *Trippe, Pr. Bost. Soc.* xv. p. 241 (Iowa, migratory) (1872); *Gieb. Thes. Orn.* i. p. 371 (part.) (1872); *Coues, Key*, p. 282 (1872); *Snow, B. Kansas*, p. 11 (1873); ? *Selat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 2 (1873); *Ridgw. Am. Nat.* viii. Febr. 1874 (semidomestic); *id. Ann. Lyc. N. Y.* x. p. 388 (Illinois) (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 360 (Cuba, Jamaica); *Blakist. & Pryer, Ibis*, 1878, p. 212 (Tokio Bay); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 260; *Sclat. P. Z. S.* 1880, p. 501; *Rchnw. Vög. d. zool. Gärt.* p. 67 (1882); ? *Salv. Cat. B. Strickl. Coll.* p. 529, n. 2572 (1882); *Blak. & Pryer, Tr. As. Soc. Jap.* x. p. 95 (part.) (1882); *Scebh. Ibis*, 1884, p. 32 (Yokohama); *Blakist. Amend. List B. Japan*, p. 33 (1884); *Seebh. Hist. Brit. B.* p. 490 (1885); *Rchnw. J. f. O.* 1890, p. 81; *Collett, Forh. Selsk. Chr.* 1890 (1891), no. 4, pp. 12–17 (Norway); *Seebh. B. Jap. Emp.* p. 238 (part.) (1890); *Brandt, J. f. O.* 1891, p. 266.

Anas hyperborea, *Gm. S. N.* i. 2, p. 504, n. 54 (part.?) (1788); ? *Lath. Ind. Orn.* ii. p. 837, n. 14 (part.) (1790); ? *Wils. Am. Orn.* viii. p. 76, pl. 68. f. 5 (1814); *Temm. Man.* p. 525 (1815); *Temm. Man.* 2nd ed. ii. p. 816 (1820); *Bp. Specch. Comp.* p. 70, n. 233 (1828); *Rich. App. Parry's 2nd Voy.* p. 365.

Chen hyperborea, *Boie, Isis*, 1822, p. 563, 1826, p. 981; *G. R. Gr. List Gen. B.* p. 73 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 417 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 129, specim. *a* (1844); *Bp. Compt. Rend.* xxxvii. p. 664 (California) (1853); *id. Coll. Delattre*, p. 93 (1854); *id. Compt. Rend.* xliii. p. 648, n. 10 (part.) (1856); *Turner, Contr. N. H. of Alaska*, p. 138 (1886); *Towns. Pr. U.S. Nat. Mus.* x. p. 195 (Sacramento Valley, California) (1887); *Nels. N. H. Coll. in Alaska*, p. 82 (1887); ? *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 423 (1891); *Hatch, B. of Minnes.* p. 73 (1892).

Chen hyperboreus, *Bp. Comp. List*, p. 55 (1838); *Gosse, B. Jam.* p. 408 (1847); *Gundl. J. f. O.* 1857, p. 225, 1861, p. 344, 1862, p. 91; *Albrecht, J. f. O.* 1862, p. 206 (Jamaica); *Blas. List B. Eur.* p. 20 (1862); *Gundl. Rep. Fis.-Nat.* i. p. 387 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 493 (1867); *Tacz. J. f. O.* 1873, p. 108 (E. Siberia); *Coues, B. N.-West*, p. 548 (part.) (1874); ? *Gundl. J. f. O.* 1874, p. 314 (Porto Rico?); *Gundl. J. f. O.* 1875, p. 371 (Cuba); *id. J. f. O.* 1878, pp. 162, 190 (Porto Rico?); *B., B., & R. Water-B. N. Am.* i. p. 439 (part.) (1864); *Saund. Yarrell's Br. B.* iv. p. 275 (part.) (1884–85); *Nehrl. J. f. O.* 1885, p. 146 (Illinois); *Matschie & Ziem. J. f. O.* 1885, p. 193; *Stejn. Bull. U.S. Nat. Mus.* x. n. 29, p. 317 (1885); *id. Pr. U.S. Nat. Mus.* x. p. 135 (Bering I.) (1887); *Collett, Orn. Jahrb.* i. p. 137 (Norway) (1890).

Anser hyperboreas, part., *Eyt. Mon. Anat.* p. 92 (1838).

Chionochen hyperboreus, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872).

Chenalopex hyperboreus, *Licht. Nomencl. Av.* p. 101 (Mexico) (1854); *C. L. Brehm, Naumannia*, 1855, p. 297, 1857, p. 357.

Anser albatus, *Cass. Pr. Ac. Philad.* 1856, p. 41 (W. and N. America); *Bp. Compt. Rend.* xliii. p. 1024 (1856); *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 333 (1858); *Ross, Canad. Natur.* (2) ii. p. 286 (Mackenzie R.) (1862); *id. Nat. Hist. Rev.* vii. p. 286 (1862); *Blakist. Ibis*, 1863, p. 139; *Turnb. B. E. Pa.* 1869, p. 45; *A. Newt. P. Z. S.* 1871, p. 58 (egg); *Saund. P. Z. S.* 1872, p. 519 (Ireland); *Harting, Brit. B.* p. 155 (1872); *Blakist. & Pryer, Ibis*, 1878, p. 218 (Tokio Bay); *Sclat. P. Z. S.* 1880, p. 501; *Ridgw. Pr. Biol. Soc. Wash.* 1884, p. 107 (=hyperboreus, *Pall.*).

Chen albatus, *Elliot, New & Unfig. B. N. Am.* ii. pl. 42 (1867); *G. R. Gr. Hand-list*, iii. p. 75, n. 10572 (1871); *Dress. B. Eur.* vi. p. 409, pl. 417. f. 2 (pt. xix., 1873); *Rowl. Orn. Misc.* ii. p. 93 pl. xlvii. (1876); *B. O. U. List Br. B.* p. 117 (1883); *Newt. Dict. of B.* p. 374 (pt. ii., 1893).

Anser hyperboreus, var. albatus, *Coues, Key N. Am. B.* p. 282, n. 480 *a* (1872); *id. Check-list*, n. 480 *a* (1873).

Anser hyperboreus *b.* albatus, *Coues, B. N.-West*, p. 549 (1874).

Chen hyperboreus albatus, *Ridgw. Pr. U.S. Nat. Mus.* 1880, p. 202, n. 591 *a*; *id. Nom. N. Am. B.* n. 591 *a* (1881); *Coues, Check-list N. Am. B.* 2nd ed. p. 111, n. 696 (1882); *id. Key N. Am. B.* 2nd ed. p. 686 (1884); *Murd. Exped. to Point Barrow*, p. 116 (Alaska) (1885).

Anas hyperboreus, "*Pall.*," *Ridgw. Pr. Biol. Soc. Wash.* ii. p. 107 (1884).

Adult. Uniform pure white, the head often stained with rusty; primaries black, becoming greyish basally, their coverts and the alulæ ash-grey: bill purplish red, the nail whitish, and the intertomial space black; iris dark brown; eyelids whitish; feet purple- or orange-red, the soles dingy yellow. Total length about 23–28 inches, wing 14·5–17, tail 6·30, culmen 1·95–2·3, tarsus 2·8–3·25.

Young. Head, neck, and upper parts pale greyish; the head more or less tinged with rusty, this deepest anteriorly; the feathers of the upper parts with whitish edges, and (especially wing-coverts and tertials) striped medially with darker; rump, upper tail-coverts, tail, and lower parts plain white: bill blackish; feet plumbeous; irides brown.

Hab. North-eastern Asia and Western North America; breeding in Alaska, migrating south in winter to Japan in Asia, and in America to Southern California and the Mississippi Valley; accidental in Northern Europe.

a, *b*. Ad. et juv. sk.	Yokohama, Oct. (*H. Pryer*).	Seebohm Coll.
c. Ad. sk.	Tokio Bay, Yokohama, Japan, March.	Capt. Blakiston [P.].
d. Ad. sk.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].
e–l. ♂ ♀ ad. et ♀ juv. sk.	Corpus Christi, Texas, Oct., Nov., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
m. Juv. sk.	Chicago, Illinois, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.

3. Chen nivalis.

Anas nivalis, *Forst. Phil. Trans.* lxii. p. 413 (1772) (Hudson's Bay).
Snow Goose, *Lath. Syn.* iii. 2, p. 445, n. 10 (part.) (1785).
Anas hyperborea, *Gm. S. N.* i. 2, p. 504, n. 54 (part.) (1788); ? *Lath. Ind. Orn.* ii. p. 831, n. 14 (part.) (1790); ? *Wils. Am. Orn.* viii. p. 76, pl. 68. f. 5 (1814); *Temm. Man.* 2nd ed. ii. p. 816 (part.) (1820).
Anser hyperboreus, *Bonn. (nec Pall) Enc. Méth.* i. p. 112 (1790) (*ex Forster*); *Pall. Zoogr. Rosso-As.* ii. p. 227 (part., Hudson Bay) (1811); *Bp. Syn.* p. 376 (1828); *Less. Tr. d'Orn.* p. 628 (1831); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 467 (1831); *Nutt. Man.* ii. p. 344 (1834); *Sw. Class. B.* ii. p. 365 (1837); *Aud. Orn. Biogr.* iv. p. 562, pl. 381 (1838); *id. Syn.* p. 273 (1839); *K. & B. Wirbelth. Eur.* pp. lxxxviii, 223 (part.) (1840); ? *Naum. Vög. Deutschl.* xi. p. 213 (part.) pl. 284 (1842); *Aud. B. Am.* vi. p. 212, pl. 381 (1843); *Giraud, B. Long I.* p. 297 (1844); *DeKay, N.Y. Zool.* ii. p. 350 (1844); *Schleg. Rev. Crit.* p. clx (1844); *G. R. Gr. Gen. B.* iii. p. 607, n. 7 (part.) (1844); ? *Lemb. Av. Cub.* p. 111 (1850); *Woodh. Sitgr. Rep.* p. 101 (1853); *Putn. Pr. Ess. Inst.* i. p. 219 (Massachusetts) (1856); *Cass. Pr. Ac. Philad.* 1856, p. 11; ? *Cab. J. f. O.* 1857, p. 225 (Cuba); *Baird, B. N. Am.* p. 760 (part.) (1858); *id. Cat. N. Am. B.* p. 563 (part.) (1859);

Wheat. Ohio Agr. Rep. n. 235 (1860); *Cass. Pr. Ac. Philad.* 1861, p. 72; *Reinh. Ibis*, 1861, n. 12 (Greenland); *Boardm. Pr. Bost. Soc.* ix. p. 129 (Maine) (1862); ? *Ross, Canad. Natural.* (2) ii. p. 151 (1862); ? *id. Nat. Hist. Rev.* vii. p. 286 (1862); *Verr. Pr. Ess. Inst.* iii. p. 159 (Maine) (1862); *Blakist. Ibis*, 1863, p. 139 (Brit. N. Am.); *Bree, B. Eur.* iv. p. 126, pl. — (1863); *Allen, Pr. Ess. Inst.* iv. p. 87 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 107 (part., Labrador) (1866); *McIlwr. Pr. Ess. Inst.* v. p. 94 (Canada, West) (1866); ? *Coues, ibid.* p. 297 (1868); *Lawr. Ann. Lyc. N. Y.* viii. p. 295 (1867); ? *Brown, Ibis*, 1868, p. 425 (Vancouver I.); *Eyt. Syn. Anat.* p. 40 (1869); *Gieb. Thes. Orn.* i. p. 371 (part.) (1872); *Saund. P. Z. S.* 1872, p. 520; *Sclat. P. Z. S.* 1880, p. 501 (part.); *Tristr. Cat. Coll. B.* p. 51 (Hudson Bay) (1889); *Seebh. B. Jap. Emp.* p. 238 (part.) (1891); ? *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 423 (1891).

? Tadorna nivea, part., *Brehm, Isis*, 1830, p. 996; *id. Handb. Vög. Deutschl.* p. 854 (part.) (1831).

Anser hyperboreas, part., *Eyt. Mon. Anat.* p. 91 (1838).

Chen hyperboreus, *G. R. Gr. Hand-list*, iii. p. 75, n. 10570 (excl. syn.) (1871); *Coues, B. N.-West*, p. 548 (part.) (1874); *B., B., & R. Water-B. N. Am.* i. p. 439 (part.) (1884); *Newt. Dict. of B.* p. 374 (pt. ii., 1893).

Chen hyperboreus nivalis, *Ridgw. Pr. Biol. Soc. Wash.* ii. p. 107 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 440 (1884); *A. O. U. Code of Nomencl. & Check-list*, p. 123, n. 169 *a* (1886); ? *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 423 (1891); *Hartert, Kat. Vogelsamml.* p. 226, n. 3355 (1891).

Anser hyperboreus nivalis, *Seebh. Hist. Br. B.* iii. p. 490 (1885).

Chen hyperborea nivalis, *Ridgw. Man. N. Am. B.* p. 115 (1887); *Hatch, B. of Minnes.* p. 75 (1892).

Similar to *C. hyperboreus*, but larger. Total length about 30–38 inches, wing 17·35–17·50, tail 6·50, culmen 2·55–2·70, tarsus 3·15–3·50.

Mr. Ridgway gives as a distinctive character for this species the culmen 2·55–2·70 against 1·95–2·30 for *C. hyperboreus*; the four specimens mentioned below have the culmen 2·30 inches long, so that they would come under *C. hyperboreus*, but as they have the bill decidedly larger than any of the birds mentioned in the previous list, which certainly belong to *C. hyperboreus*, and as at least the first two, from the Arctic Overland Expedition and Repulse Bay, from their locality ought to belong to *C. nivalis*, I have kept all the four under this species. But I must confess that it appears to me that the distinction of an Eastern form from a Western one is not yet satisfactorily established.

Hab. Eastern North America; breeding-ground unknown, but probably arctic regions east of Mackenzie River; United States (Mississippi Valley to Atlantic coast) only during migrations and in winter.

a. Ad. st.	Arctic Land Exp.	Capt. Back [P.].
b. Ad. st.	Repulse Bay, N. Hudson Bay.	Dr. Rae [P.].
c. Ad. sk.	Vancouver Is.	Salvin-Godman Coll.
d. Ad. sk.	St. Juan de Fuca, Vancouver Is.	

4. Chen rossi.

Horned Wawey *of Hearne, Journ. to the North Ocean*, p. 442 (1795).

Anser rossi, *Baird, MS.*; *Cass. Pr. Ac. Philad.* 1861, p. 73; *Ross, Canad. Nat.* vii. p. 151 (1862); *id. Nat. Hist. Rev.* (2) ii. p. 286 (Mackenzie River) (1862); *Blakist. Ibis*, 1863, p. 139; *Schleg. Mus. P.-B.*, Anseres, p. 108 (1866); *Eyt. Syn. Anat.* p. 46 (1869); *Gieb. Thes. Orn.* i. p. 373 (1872); *Coues, Key*, 1872, p. 282; *id. Check-list*, n. 481 (1873); *id. B. N.-West*, p. 553 (1874); *Allen, Bull. Nutt. Orn. Club*, i. p. 52 (1876); *Sclat. P. Z. S.* 1880, p. 501.

Exanthemops rossii, *Elliot, Ill. Am. B.* iv. pl. 44 (1869); *G. R. Gr. Hand-list*, iii. p. 75, n. 10573 (1871); *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 341 (1890).

Chen rossi, *Ridgw. Pr. U.S. Nat. Mus.* 1880, p. 203; *id. Nom. N. Am. B.* n. 592 (1881); *Coues, Check-list*, 2nd ed. p. 111 n. 697 (1882); *B., B., & R. Water-B. of N. Am.* i. p. 444 (1884); *Coues, Key to N. Am. B.* p. 686, n. 697 (1884); *A. O. U. Code of Nomencl. & Check-list*, p. 126, n. 170 (1886); *Ridgw. Man. N. Am. B.* p. 115 (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 423 (1891).

Adult. Colours exactly as in *C. hyperboreus*. Entirely snowy white, the primaries black, fading into hoary ash basally; bastard-wing and primary-coverts hoary ash: bill with the basal portion of upper mandible often wrinkled and warty; colour of the bill dull reddish, the tip white; feet dull reddish. Total length 20–26 inches, wing 13·75–15·50, tail 5, culmen 1·50–1·70, tarsus 2·30–3.

Young. White, tinged with greyish, the centres of the feathers of the upper parts deeper greyish; bill and feet dusky.

Hab. Interior of Arctic America in summer, migrating south in winter to Southern California, and eastward to Montana.

a. Ad. st.	California.	Purchased.
b. Ad. st.	San Joaquin Fall, California.	Hr. Gruber [C.].
c, *d*, *e*. ♀ ad. et ad. sk.	San Francisco, California, winter (*G. W. Harford*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Stockton, California, Feb. (*S. Huskins*).	Salvin-Godman Coll.

15. ANSER.

	Type.
Anser, *Briss. Orn.* vi. p. 261 (1760)	A. ferus.
Anseria, *Rafinesque, Analyse*, p. 72 (1815).	
Marilochen, *Rchnb. Av. Syst. Nat.* p. ix (1852)	A. erythropus.

Range. Northern Hemisphere.

Key to the Species.

A. Tomia distinctly arched, with indentations of upper mandible quite apparent (*Anser*).

a. Nail of the bill white.

a'. Rump french-grey, no conspicuous white on forehead ..... } *ferus*, p. 89. } *rubrirostris*, p. 91.

b'. Rump dark greyish brown.
b''. White on the forehead not reaching a line between the eyes.
*b*³. Smaller: total length about 27 inches, culmen 1·9 ..... *albifrons*, p. 92.
*c*³. Larger: total length about 29 inches, culmen 2·3 ..... *gambeli*, p. 95.
c''. White on the forehead reaching a line between the eyes on the top of the head: total length about 21 inches, culmen 1·27 ..... *erythropus*, p. 97.
b. Nail of the bill dusky or black; no dark brown band well-defined on the hind neck.
c'. An orange band round the median part of the beak; feet orange.
c''. Smaller: culmen 2·6 inches ..... *fabalis*, p. 99.
d''. Larger: culmen 2·4–3·4 inches .... *serrirostris*, p. 101.
d'. A pink band round the median part of the beak; feet pink flesh-colour .. *brachyrhynchus*, p. 103.
B. Tomia not very arched, almost straight; indentations of upper mandible scarcely apparent (*Eulabeia*); dark brown band well-defined along the hind neck; head white, with two black crescentic bands on the occiput and nape ..... *indicus*, p. 105.

1. Anser ferus.

Grey Lag Goose.

Anser domesticus, *Briss. Orn.* vi. p. 262 (1760) (*ex Gesner*).

Anas anser (ferus), *Brünn. Orn. Bor.* p. 13, n. 53 (1764).

Anas anser, *Linn. S. N.* i. p. 197, n. 9 (*a* & *β*) (1766); *Gm. S. N.* i. 2, p. 510, n. 9 (1788); *Lath. Ind. Orn.* ii. p. 841, n. 26 (1790); *Bp. Specchio Comp.* p. 70, n. 216 (1827).

Oca paglietana, *Gerini, Stor. degli Ucc.* v. tav. 559 (1776).

Oie, *Buff. Hist. Nat. Ois.* ix. p. 30, pl. 2 (1783).

Grey lag-goose, *Penn. Arct. Zool.* ii. p. 546, n. 473 (1785); *Lath. Syn.* iii. 2, p. 459, n. 21 (1785).

Anser ferus, *Schaeff. Mus. Orn.* p. 67, n. 214 (1789).

Anas anser ferus, *Bechst. Orn. Taschenb.* ii. p. 415, with pl. (1803); *Temm. Man. d'Orn.* p. 526 (1815); *id. op. cit.* 2nd ed. ii. p. 818 (1820); *Werner, Atlas*, Palmipèdes, pl. 29 (18—?); *Less. Tr. d'Orn.* p. 628 (1831).

Anser cinereus, *Meyer* (*nec Bonn.*), *Taschenb.* ii. p. 552 (1810); *Vieill. N. D.* xxiii. p. 313 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 458 (1825); *Roux, Orn. Prov.* pls. 358, 359 (1825); *Cuv. Règn. An.* 2nd ed. i. p. 508 (1829); *Savi, Orn. Tosc.* iii. p. 178 (1831); *Brehm, Vög. Deutschl.* p. 835 (1831); *Bp. Comp. List*, p. 35, n. 398 (1838); *Bartl. P. Z. S.* 1839, p. 2; *K. & B. Wirbelth. Eur.* pp. lxxxiii, 224 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 423 (1842); *Naum. Vög. Deutschl.* xi. p. 229, Taf. 285 (1842); *Schleg. Rev. Crit.* p. cix (1844); *Rchnb. Syn. Av.*, Natatores, t. 103. ff. 955–57 (1845); *Kjærb. Fugle*, p. 357, Taf. 44 (1852); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Licht. Nomencl. Av.* p. 100 (1854); *Wallengr. Naumannia*, 1854, p. 267 (Scandinavia); *Selys, Naumannia*, 1855, p. 262; *Bp. Compt. Rend.* xliii. p. 648, n. 15 (1856); *Schleg. Vog. Nederl.* pl. 275 (1861); *Nordm. J. f. O.*

1864, p. 326 (Finland); *Schleg. Mus. P.-B.*, Anseres, p. 109 (1866); *Fritsch, Vög. Eur.* p. 406, Taf. 4. ff. 3, 7 (1870); *Malmgr. J.f. O.* 1870, pp. 287, 288 (Finland); *G. R. Gr. Hand-list*, iii. p. 74, n. 10561 (1871); *Gieb. Thes. Orn.* i. p. 370 (1872); *Sund. Sv. Fogl.* pl. 56. f. 2 (1872); *id. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Alst. & Brown, Ibis*, 1873, p. 70 (Archaugel); *Finsch, Ibis*, 1877, p. 62 (Obdorsk); *Dress. B. of Eur.* vi. p. 355, pl. 41 (pts. 71, 72, 1878); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 258 (W. Siberia); *Hume & Marsh. Game Birds*, iii. pl. 7 (1880); *Sclat. P. Z. S.* 1880, p. 499; *B. O. U. List Brit. B.* p. 115 (1883); *Sclat. List Vert. An.* 8th ed. p. 417, n. 947 (1883); *Gaetke, J. f. O.* 1883, p. 81 (Heligoland); *Radde, Ornis Caucas.* p. 445 (1884); *Saund. Yarrell's Br. B.* iv. p. 253 (1884–85); *Seebh. Hist. Brit. B.* iii. p. 500 (1885); *Tristr. Cat. Coll. B.* p. 291 (1889); *Meyer, Abbild. Vogel-Skel.* pl. cxvii (1889); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. pp. 291, 292 (1891); *Kolamb. Glasnik. Naravosl. Drüz.* vi. p. 168 (1891).

Anser vulgaris, *Pall. Zoogr. Rosso-As.* ii. p. 222 (part.) (1811).

? Anser medius, "*Temm.*," *Meyer, Taschenb. Zus. u. Ber.* p. 231 (1822).

Anser ferus, *Steph. Gen. Zool.* xii. 2, p. 28, pl. 41 (1824); *Gould, B. Eur.* pl. 347 (1837); *Eyt. Mon. Anat.* p. 93 (1838); *G. R. Gr. List Gen. B.* p. 73 (1840); *id. List B. Brit. Mus.* iii. p. 129 (1844); *id. Gen. B.* iii. p. 607, n. 1 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Strickl. Ann. & Mag. N. H.* (3) iii. pp. 122, 124 (1859); *G. R. Gr. Cat. Brit. B.* p. 186 (1863); ? *Boie, J. f. O.* 1863, p. 61; *Sclat. P. Z. S.* 1869, p. 629; *Eyt. Syn. Anat.* p. 42 (1869); *Elw. & Buckl. Ibis*, 1870, p. 339 (Macedonia); *A. Newt. Pr. Ac. Philad.* 1871, p. 98; *Gould, B. Great Brit.* v. pl. 1 (pt. xxiv., 1873); *Rchnw. Vög. Zool. Gärt.* p. 67 (1882); *Rchnw. J. f. O.* 1890, p. 81 *Dub. Faun. Vert. Belg., Ois.* ii. p. 393 (1891); *Pears. & Bidw. Ibis*, 1894, p. 232 (N. Norway).

Anas cinerea, *Ranz. El. di Zool.* iii. 9, p. 87 (1826).

Anser palustris, *Flem. Brit. An.* p. 126 (1828).

Anser sylvestris, *Brehm* (*nec Briss.*), *Isis*, 1830, p. 996 (descr. nulla); *id. Vög. Deutschl.* p. 836 (1831).

Anser cineraceus (*errore*), *Marchand, Rev. et Mag. de Zool.* 1877, p. 355, pl. 14 (pullus, pl. cxxxv.).

Anser anser, *Hartert, Kat. Vogelsamml.* p. 226 (1891).

Adult male. Head, neck, upper part of the back, and scapulars ash-brown, the feathers of the latter with lighter edges; lower back and rump lavender-grey; a narrow white edge round the base of the upper mandible; fore-neck, breast, and abdomen greyish brown, paler than the upper parts; on the abdomen more or less numerous transverse black spots, sometimes almost confluent; lower abdomen, vent, under and upper tail-coverts white; sides and flanks brown, with the edges of the feathers pale grey, producing a barred appearance; upper smaller wing-coverts, bend of the wing, winglet, primary-coverts, and base of primaries french-grey; remainder of the wings brown-grey, the edges of the coverts and secondaries white; shaft of quills white, except at the tip; under wing-coverts and axillaries french-grey; two outermost tail-feathers white, the two middle ones greyish brown with white tips, the remainder white, but greyish brown on the outer web, except

at the tip, which is white: bill pink flesh-colour, with the horny nail white; irides brown; legs, toes, and membranes dull flesh-colour; claws black. Total length 32 inches, wing 17·5, tail 5·5, bill 2·65, tarsus 2·8.

Female. Similar to the male, but smaller. Total length 30 inches, wing 16.

Young. Darker than the adult and with no black spots on the breast and abdomen; they are easily distinguished by the grey colour of the shoulders and rump, and flesh-colour of the bill and legs.

Hab. Western Palæarctic region.

a. Ad. sk.	Great Britain.	
b. Ad. st.	Great Britain.	Purchased.
c, d. Ad. st.	Norfolk.	Purchased.
e. Ad. st.	Blackwater R., Essex.	F. Bond, Esq. [P.].
f. ♀ ad. sk.	Tromsö, Norway, June.	Seebohm Coll.
g. Pull. sk.	Bodö, Norway.	Salvin-Godman Coll.

h. Skeleton.
i. Skeleton (Domestic variety).
k–q. Skulls (Domestic variety).
r. Sternum with shoulder-girdle (Domestic variety)

2. Anser rubrirostris.

? Anser vulgaris, part., *Pall. Zoogr. Rosso-As.* ii. p. 222 (1811); *Brandt, J. f. O.* 1891, p. 266.

Anser erythropus, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 129, specim. *e, f* (India) (1844).

Anser rubrirostris, *Hodgs. Icon. Ined. in Mus. Brit.* pl. 579; *id. Gray's Zool. Misc.* p. 86, no. 579 (1844); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 144 (1846); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 41 (1877).

Anser ferus, *Adams* (*nec auct.*), *P. Z. S.* 1859, p. 189 (Ladakh, breeding); *Swinh. Ibis*, 1861, p. 344, 1862, p. 254; *id. P. Z. S.* 1863, p. 323, 1870, p. 427.

Anser cinereus, *Blyth* (*nec Meyer*), *Cat. B. Mus. A. S. B.* p. 300, n. 1775 (India) (1849)'; *Schrenck, Vög. Amurl.* p. 465 (1860); *Radde, Reis. Sibir.* p. 358 (Mongolia) (1863); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76, no. 627 (1863); *Jerd. B. of Ind.* iii. p. 779 (1864); *Blyth, Ibis*, 1867, p. 174; *Dyb. & Parrex, J. f. O.* 1868, p. 338 (Dauria); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Hume, Str. Feath.* i. p. 258 (Punjab and Sindh) (1873); *id. Nests & Eggs*, p. 635 (1873); *Butl. Str. Feath.* iv. p. 26 (1876); *Scully, ibid.* p. 197 (Turkestan) (1876); *Dress. Ibis*, 1876, p. 418; *David & Oust. Ois. Chine*, p. 491 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 95 (Mongolia) (1878); *Hume, Str. Feath.* vii. p. 491 (1879), viii. p. 114, n. 945 (1879); *Hume & Marsh. Game-Birds*, iii. p. 56 (*nec* pl. 7) (1880); ? *Zaroudn. Ois. Transcasp.* p. 72 (1885); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; *Pleske, Rev. Turkest. Orn.* p. 54, n. 369 (1888); *Hume, Nests & Eggs* (*Oates' ed.*), iii. p. 279 (1890); *Sharpe, Sec. Yark. Miss., Aves*, p. 128 (1891); *Pleske, Mél. Biol.* xiii. p. 298, n. 165 (1892); *Oust. Nouv. Arch. Mus.* (4) vi. p. 96 (1894).

Anser cinereus, var. rubrirostris, *Swinh. P. Z. S.* 1871, p. 416 (Shanghai); *Dyb. J. f. O.* 1873, p. 108, 1874, p. 336; *Przew.*

Mongolie, ii. pp. 149, 170, n. 253 (1876); *Prjev. in Rowl. Orn. Misc.* iii. p. 95 (1878).
Anser cinereus β. subalbifrons, *Severtz. J. f. O.* 1875, p. 184 (Turkestan).
Anser cinereus rubrirostris, *Seebh. Hist. Brit. B.* iii. p. 501 (1885).

Similar to *A. ferus*, but somewhat larger, especially the bill and feet, and more marked with black on the underparts; bill of a flesh-colour, with the base of the upper mandible bright red (*Radde*). Total length about 33 inches, wing 18, tail 6·5, culmen 2·7, tarsus 3·2.

Young birds have the underparts greyish white, with no black markings.

Hab. Siberia, in winter Northern India and S. China.

a. ♂ ad. sk.	Sassyk-Ala Kul, Turkestan, May.	Dr. Otto Finsch [C.].
b. Imm. sk.	Kashgar, Feb. (*Forsyth*).	India Museum [P.].
c, *d.* Ad. st.	India.	Purchased.
e, *f.* Ad. et imm. sk.	India.	Colonel Cobb [C.].
g. Ad. sk.	India (*Blyth*).	India Museum [P.].
h. ♀ ad. sk.	R. Jheelum below Shahpoor, Nov. (*A. O. H.*).	Hume Coll.
i. ♂ ad. sk.	R. Indus, Dec. (*A. O. H.*).	Hume Coll.
k. Ad. sk.	Delhi.	Hume Coll.
l. Ad. sk.	Gurgaon, Feb. (*W. H. Chill*).	Hume Coll.
m–*q.* Ad. et imm. sk.	Etawah, Nov., Dec., Feb.	Hume Coll.
r. ♀ ad. sk.	Futtehgubr, Nov. (*A. Anderson*).	Seebohm Coll.
s. ♂ ad. sk.	Allahabad, Nov. (*A. O. H.*).	Hume Coll.
t–*v.* Ad. et imm. sk.	Oudh, Nov., Jan., Feb.	Hume Coll.
w. Ad. sk.	Kurnal, Feb.	Hume Coll.
x. ♂ imm. sk.	Dollah, Assam, April (*J. Cockburn*).	Hume Coll.
y. Ad. sk.	Canton, China (*S. Bligh*).	Seebohm Coll.

3. Anser albifrons.

White-fronted Goose.
Anas septentrionalis sylvestris, *Briss. Orn.* vi. p. 269 (1760).
Branta albifrons, *Scop. Ann. I. Hist. Nat.* p. 69, n. 87 (1769).
Anser casarka, *S. G. Gm.* (*nec* Anas casarka) *Reis.* ii. p. 177, t. 13 (1774).
Oca lombardella, *Gerini, Stor. degli Ucc.* v. t. 560 (1776).
Oye rieuse, *Buff. Hist. Nat. Ois.* ix. p. 81 (1783).
White-fronted Goose, *Lath. Syn.* iii. 2, p. 463, n. 22 (1785).
Anas albifrons, *Lath. Gen. Suppl.* i. p. 297 (1787); *Gm. S. N.* i. 2, p. 509, no. 64 (part.) (1788); *Lath. Ind. Orn.* ii. p. 842, n. 27 (part.) (1790); *Vieill. N. D.* xxiii. p. 344 (part.) (1818); *Temm. Man. d'Orn.* 2nd ed. ii. p. 821 (1820); *Werner, Atlas*, Palmipèdes, pl. 31 (1828).
Anas albicans (errore), *Gm. S. N.* i. 2, p. 516, n. 76 (1788); *Lath. Ind. Orn.* ii. p. 845, n. 34 (1790); *Bechst. Orn. Taschenb.* ii. p. 454, n. 38 (1803); *Gieb. Thes. Orn.* i. p. 344 (1872) (=Branta albifrons, *Scop.*).

Anas erythropus *Wahlb.* (*nec Linn.*) *Schrift. d. Berl. Ges. naturf. Fr.* viii. pp. 75–91 (1788).

Anser albifrons, *Bonn. Enc. Méth.* i. p. 114 (part.) (1790); *Bechst. Gemein. Naturg. Deutschl.* 2nd ed. iv. p. 898 (1809); *Steph. Gen. Zool.* xii. 2, p. 25 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 461 (1825); *Bp. Specchio Comp.* p. 70, n. 218 (1827); *Less. Tr. d'Orn.* p. 628 (1831); *Savi, Orn. Tosc.* iii. p. 179 (1831); *Ménétr. Cat. Rais.* p. 56 (1832); *Gould, B. Eur.* pl. 289 (pt. xii., 1837); *Bp. Comp. List*, p. 55, n. 397 (1838); *Bartl. P. Z. S.* 1839, p. 3; *Naum. Vög. Deutschl.* xi. p. 351, Taf. 289 (1842); *Strickl. P. Z. S.* 1842, p. 167 (China); *Schleg. Rev. Crit.* p. cx (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Kjærb. Danm. Fugle*, pl. 45, *Suppl.* pl. 24 (1852); *Midd. Reis. O.-Sibir.* ii. p. 227 (Taimyrland) (1853); *Schleg. Vog. Nederl.* pls. 280, 281, 282 (1854); *Wallengr. Naumannia*, 1854, p. 268 (1854); *Licht. Nomencl. Av.* p. 100 (1854); *Selys-L. Naumannia*, 1855, p. 263; *Bp. Compt. Rend.* xliii. p. 648, n. 18 (1856); *Adams, P. Z. S.* 1858, p. 509 (Punjab); *Taylor, Ibis*, 1859, p. 54 (Egypt); *A. Newt. P. Z. S.* 1860, p. 340; *Powys, Ibis*, 1860, p. 351; *Reinh. Ibis*, 1861, p. 12 (Greenland); *F. & P. Godman, Ibis*, 1861, p. 90 (Bodö); *Swinh. Ibis*, 1861, p. 344 (N. China); *id. P. Z. S.* 1863, p. 323; *Radde, Reis. S. O.-Sibir.* ii. p. 358 (Irkutsk) (1863); *Nordm. J. f. O.* 1864, p. 376 (Finland); *Jerd. B. of Ind.* iii. p. 780 (Punjab) (1864); *Degl. & Gerbe, Orn. Eur.* ii. p. 483 (1867); *Elw. & Buckl. Ibis*, 1870, p. 339 (Macedonia); *Malmgr. J. f. O.* 1870, p. 292; *David, N. Arch. Mus. Bull.* vii. *Cat.* n. 441 (1871); *A. Newt. Pr. Ac. Philad.* 1871, p. 99; *Swinh. P. Z. S.* 1871, p. 416; *Shell. Ibis*, 1871, p. 315 (Egypt); *G. R. Gr. Hand-list*, iii. p. 74, n. 10565 (1871); *Gould, B. Great Brit.* v. pl. 4 (pt. xix., 1871); *Sund. Svensk. Fogl.* pl. 57. f. 1 (1872); *Shell. B. Egypt*, p. 280 (1872); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Dyb. J. f. O.* 1873, p. 108; *Palmén, Not. Fenn.* (n. s.) xi. pp. 353, 355 (Finland) (1875); *A. Newt. Man. Nat. Hist. Greenl.* p. 113 (1875); *Dress. Ibis*, 1876, p. 418 (Turkestan); *Blanf. East. Pers.* ii. p. 303 (1876); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 42 (1877); *David & Oust. Ois. Chine*, p. 492 (1877); *Dress. B. Eur.* vi. p. 375, pl. 414 (pts. 65, 66, 1878); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 260 (W. Siberia); *Hume, Str. Feath.* viii. p. 114, n. 947 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 73, pl. 10 (1880); *Sclat. P. Z. S.* 1880, p. 500; *Freke, Zoologist*, Sept. 1881, p. 365; *Ridgw. Nomencl. N. Am. B.* n. 593 (1881); *Coues, Check-list*, 2nd ed. p. 111, n. 692 (1882); *Rchnw. Vög. zool. Gärt.* p. 66 (1882); *Salv. Cat. B. Strickl. Coll.* p. 528, n. 2570 (1882); *B. O. U. List Br. B.* p. 116 (1883); *Sclat. List Vert. An.* 8th ed. p. 418 (1883); *Seebh. Ibis*, 1884, p. 269 (C. China); *Coues, Key N. Am. B.* p. 684, n. 692 (Greenland) (1884); *Radde, Ornis Caucas.* p. 444 (1884); *Tristr. Faun. & Flor. Palest.* p. 114 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 261 (1884-85); *Seebh. Hist. Br. B.* iii. p. 505, pl. 60 (1885); *Salvad. El. Ucc. Ital.* p. 252, n. 349 (1886); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; *Ridgw. Man. N. Am. B.* p. 116 (1887); ? *Gigl. & Salvad. P. Z. S.* 1887, p. 589 (Corea); ? *id. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 140 (1888); *Lilf. Col. Fig. Br. Birds*, pt. x. pl. — (1889); *Rchnw. J. f. O.* 1890, p. 81; *Dub. Faun. Vert. Belg., Ois.* ii. p. 405 (1891); *Kolamb. Glasnik. Naravosl. Drüz.* vi. p. 168 (Dalmatia) (1891); *Sharpe, Sec. York. Miss., Aves*, p. 128 (1891).

Anser erythropus, *Flem.* (*nec Linn.*) *Brit. An.* p. 121 (1828); *Eyt.*

Mon. Anat. p. 90 (part.) (1838); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 418 (1842); *G. R. Gr. Gen. B.* iii. p. 607, n. 3 (part.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 102. ff. 238-39 (1845); *G. R. Gr. Cat. Brit. B.* p. 187 (1863); *Schleg. Mus. P.-B.*, Anseres, p. 110 (part.) (1866); *Eyt. Syn. Anat.* p. 38 (part.) (1869); *Fritsch, Vög. Eur.* p. 404, t. 45. f. 9 (1870); *Gieb. Thes. Orn.* i. p. 370 (part.) (1872); *Hume, Str. Feath.* i. p. 259 (Jhelum) (1873); *Seebh. Ibis*, 1884, p. 269 (juv.) (Yang-tse-Kiang).

Anser medius, *Bruch* (*nec Meyer*), *Isis*, 1828, p. 732; *Sleep, Isis*, 1829, p. 1054; *Temm. Man. d'Orn.* 2nd ed. iv. p. 519 (1840); *Licht. Nomencl. Av.* p. 100 (1854); *Brehm, Naumannia*, 1855, p. 297 (=intermedius, *Naum.*).

Anser bruchii, *C. L. Brehm, Isis*, 1830, p. 996 (descr. nulla); *id. Vög. Deutschl.* p. 841 (1831); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 419 (1842); *G. R. Gr. Gen. B.* iii. p. 607, n. 4 (1844); *Rchnb. Syn. Av.*, Natatores, t. 103. f. 958 (1845); *C. L. Brehm, Naumannia*, 1855, p. 297; *Bp. Compt. Rend.* xliii. p. 648, n. 16, p. 1025 (1856); *Fritsch, Vög. Eur.* p. 405, t. 45. f. 5 (1870).

Anser intermedius, *Naum. Vög. Deutschl.* xi. p. 340, t. 288 (1842); *Selys, Naumannia*, 1855, p. 263; *Blas. in Naum. Vög. Deutschl.* xiii. p. 293 (1860); *Rchnw. J. f. O.* 1890, p. 81; *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 341 (Egypt) (1890).

? Anser albifrons roseipes, *Schleg. Naumannia*, 1855, pp. 254, 256, 257.

? Anser pallipes, *Selys, Naumannia*, 1855. p. 264 (domestic race); *Degl. & Gerb. Orn. Eur.* ii. p. 485 (1867); *Fritsch, Vög. Eur.* p. 405 (1870).

? Anser albifrons *a.* pallipes, *Bp. Compt. Rend.* xliii. p. 648 (1856).

? Anser pallidipes, *A. Newt. Pr. Ac. Philad.* 1871, p. 99 *.

Adult male. Forehead and feathers at the base of the upper mandible white; head, neck, back, rump, and wings brownish ash-colour; upper tail-coverts white; breast and belly pale brownish white, with patches and broad bars of black; sides and flanks ash-brown, with paler edgings, and with a white band on the upper margin; vent and under tail-coverts white; upper wing-coverts greyish brown, with paler edgings, the greater ones edged with white, forming a conspicuous band; wing-primaries bluish black; secondaries black; tail-feathers dark grey, tipped with white: bill orange-yellow, the nail white; irides dark brown; legs, toes, and membranes orange, claws whitish horn-colour. Total length 27 inches, wing 16, tail 6, culmen 1·9, tarsus 2·5.

Female. Similar to the male, only somewhat smaller.

Young bird of the year is more uniform in colour and rather darker; the feathers at the base of the upper mandible are of a deeper brown than those of the rest of the head; the nail and point of the beak light brown; the pale brown feathers of the breast are uniform in colour, without any dark patches or bars.

Hab. Northern Palæarctic region from Iceland to Siberia, and also Greenland, migrating south to the coasts of the Mediterranean, Egypt, the Caspian Sea, Northern India, and China.

* Larger than *A. albifrons* and with the legs of *A. ferus* (*i. e.* pink flesh-colour).

a. Ad. sk.	Dungloe, Co. Donegal, Jan.	Colonel Irby [P.].
b. ♀ ad. sk.	Fethard, Clonmel, April.	Capt. Waldron [P.].
c. ♀ ad. st.	Island of Tiree.	Col. Irby & Capt. Reid [P.].
d. ♀ ad. sk.	Thurso (*R. G. W. R.*).	Tweeddale Coll.
e. Ad. sk. [Grey variety.]	Carse of Gowrie, Feb.	C. H. Watson, Esq. [P.].
f. ♂ ad. sk.	Breydon, Norfolk, Nov.	Col. Feilden [P.].
g–i. ♂ ♀ ad. et imm. sk.	St. Bride's, South Wales, Jan.	Hon. W. Edwardes [P.].
k. Imm. sk.	Wales.	Montagu Coll.
l. Imm. sk.	Cambridge, Dec.	Salvin-Godman Coll.
m. Pull. sk.	Cambridge (*Baker*).	Gould Coll.
n. Imm. sk.	Wiltshire.	Montagu Coll.
o. ♂ ad. sk.	Brighton, Feb.	Seebohm Coll.
p–r. ♂ ♀ ad. sk.	Holland, Jan.	H. J. Pike, Esq. [P.].
s. ♀ ad. sk.	Alexandria, Egypt, Feb.	H. J. Elwes, Esq. [P.].
t. Ad. sk.	Alexandria, Egypt, Feb.	Shelley Coll.
u, v. Ad. et imm. sk.	Fayoom, Egypt, Feb., Mar. (*G. E. S.*).	Shelley Coll.
w. ♂ ad. sk.	Lucknow.	Hume Coll.
x–z. ♂ ♀ ad. sk.	R. Jheelum below Shahpoor, Nov. (*A. O. H.*).	Hume Coll.
a'. Ad. sk.	Kiukiang, Oct.	F. W. Styan, Esq. [P.].
b'. Juv sk.	Yangtze, Oct. (*F. W. Styan*).	Seebohm Coll.
c'. ♂ juv. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.
d', *e'*. Skeletons.		
f'. ♂, skeleton.	Holland.	H. J. Pike, Esq. [P.].

4. Anser gambeli.

Anser canadensis fuscus maculatus, *Edw. Birds*, pl. 153 (Hudson's Bay) (1750).

Anas erythropus, part., *Linn. S. N.* i. p. 197, n. 11 (America sept.) (1766).

Anas albifrons, part., *Gm. S. N.* i. 2, p. 509, n. 64 (America) (1788); *Lath. Ind. Orn.* ii. p. 892, no. 27 (1790); *Vieill. N. D.* xxiii. p. 344 (part.) (1819); *Steph. Gen. Zool.* xii. 2, p. 25 (1824); *Bp. Specchio Comp.* p. 70, no. 235 (part.) (1827).

Anser albifrons, *Bp.* (*nec Scop.*) *Syn.* p. 376 (1828); *Wagl. Isis*, 1831, p. 531 (Mexico); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 466 (Mackenzie River, north of 67°, and Arctic coast, breeding) (1831); *Nutt. Man.* ii. p. 346 (1834); *Aud. Orn. Biogr.* iii. p. 568, pl. 286 (1836); *Bp. Comp. List*, p. 55, no. 367 (1838); *Aud. Syn.* p. 272 (1839); *id. B. Am.* vi. p. 209, pl. 380 (1843); *Giraud, B. Long Isl.* p. 296 (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 125 (1850); *Peale, U.S. Expl. Exped.* viii. no. 159 (Oregon and California) (1848); *Hartl. Wiegm. Arch.* 1852, i. p. 122; *Henry, Pr. Philad. Ac.* 1855, p. 316; *Wied, J. f. O.* 1859, p. 166; *Heerm. P. R. R. Rep.* x. pt. vi. p. 68 (California) (1859); *Hoy, Smiths. Rep.* p. 438 (Missouri) (1864); *Trippe, Pr. Ess. Inst.* vi. p. 119 (Minnesota) (1871); *Swinh. Ibis*, 1875, p. 456 (Hakodadi), 1877, p. 146; *Blakist. & Pryer, Ibis*, 1878, p. 212; *iid. Tr. As. Soc. Jap.* viii. p. 182 (1880), x. p. 95 (1882); *Blakist. Amend. List B.*

Jap. p. 8 (1884); *Seebh. B. Jap. Emp.* p. 237 (1890); *Brandt, J. f. O.* 1891, p. 266.

? Anser segetum, *Nutt.* (*nec Gm.*), *Man.* ii. p. 348 (1834) (N.E. America) (*fide Brandt, J. f. O.* 1891, p. 266).

Anser gambeli, *Hartl. Rev. et Mag. Zool.* 1852, p. 7; *id. Naumannia*, 1852, p. 2; *Bp. Compt. Rend.* xliii. p. 648, n. 17 (1856); *Cab. J. f. O.* 1857, p. 226 (Cuba); *Cass. US. Expl. Exp., Mamm. and Orn.* p. 334 (1858); *Baird, B. N. Am.* p. 761 (1858); *Coop. & Suckl. N. H. Wash. Terr.* p. 249 (1860); *Wheat. Ohio Agr. Rep.* no. 236 (1860); *Blakist. Ibis*, 1863, p. 140; *Allen, Pr. Ess. Inst.* iv. p. 87 (Massachusetts) (1864); *Gundl. Repert. Fis.-Nat.* i. p. 387 (1866); *Coues, Pr. Ess. Inst.* v. p. 298 (New England) (1868); *id. Pr. Philad. Ac.* 1866, p. 98 (Arizona); *King, Sportsm. and Natur. in Canada*, p. 190 (1866) (= albifrons); *Dress. Ibis*, 1866, p. 42 (Texas); *Coues, Ibis*, 1866, p. 269; *id. Pr. Bost. Soc.* xii. p. 124 (South Carolina) (1868); *Brown, Ibis*, 1868, p. 425 (Vancouver Isl.); *Dall & Bann. Tr. Chic. Ac.* i. p. 294 (Yukon, breeding) (1869); *Turnbull, B. E. Pa.* p. 35 (1869); *Bann. Pr. Ac. Philad.* 1870, p. 131 (critical); *Snow, B. Kans.* p. 11 (1870); *G. R. Gr. Hand-list*, iii. p. 15, n. 10566 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 3 (1873); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 5 (1873); *id. Avif. Aleut. Isl. west Unal.* p. 6 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 313 (Mazatlan) (1874); *Gundl. J. f. O.* 1875, p. 375 (Cuba); *Sclat. & Salv. P. Z. S.* 1876, p. 361; *Sclat. P. Z. S.* 1880, p 500; *Saund. Yarrell's Hist. Brit. B.* iv. p. 264 (1884–85); *Seebh. B. Japan. Emp.* p. 237 (1890).

Anser albifrons, var. gambeli, *Coues, Key*, p. 282 (1872); *Ridgw. Ann. Lyc. N. Y.* x. p. 388 (Illinois) (1874); *Coues, B. N.-West*, p. 546 (1874); *Nels. Cruise 'Corwin,'* p. 93 (1883) (Sib. coast of Bering Sea); *B., B., & R. Water-B. N. Am.* i. p. 448 (1884); *Turner, Auk*, 1885, p. 158.

Anser erythropus, *Eyt. Mon. Anat.* p. 90 (part.) (1838); *Baird* (*nec Linn.*), *Stansb. Rep.* p. 321 (1852); *Woodh. Sitgr. Rep.* p. 102 (1853); *Newb. Pr. R. R. Rep.* vi. p. 101 (1857); *Schleg. Mus. P.-B.*, Anseres, p. 110 (part., America) (1866); *Eyt. Syn. Anat.* p. 38 (1869).

Anser frontalis, *Baird, B. N. Am.* p. 562 (New Mexico, young) (1858); *id. Cat. N. Am. B.* n. 566 (1859); *Henry, Pr. Ac. Philad.* 1859, p. 109; *McIlwr. Pr. Ess. Inst.* v. p. 94 (Canada) (1866); *G. R. Gr. Hand-list*, iii. p. 25, n. 10567 (1871).

Anser albifrons gambeli, *Ridgw. Pr. U.S. Nat. Mus.* 1880, p. 203; *id. Nom. N. Am. Birds*, n. 543 *a* (1881); *Coues, Check-list*, 2nd ed. p. 111, n. 693 (1882); *id. Key N. Am. B.* p. 684, n. 693 (1884); *Stejn. Bull. U.S. Nat. Mus.* n. 29, pp. 145, 317, pl. vii. f. 2 (head) (1885); *Murdoch, Rep. Erp. Point Barrow*, p. 593 *a* (1885); *Turner, Contr. N. H. of Alaska*, p. 138 (1886); *Bryant, Bull. Calif. Ac. of Science*, 1886, p. 279 (Guadalupe I.); *Nelson, Rep. N. H. Coll. in Alaska*, p. 83 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 134 (Bering I.) (1887); *Ridgw. Man. N. Am. B.* p. 116 (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 423 (1891); *Hatch, B. of Minnes.* p. 75 (1892).

?Anser brachyrhynchus, *Swinh.* (*nec Baill.*) *Ibis*, 1875, p. 456 (Hakodadi); *Blak. & Pryer, Ibis*, 1878, p. 212; *iid. Tr. As. Soc. Jap.* viii. p. 182 (1880), x. p. 95 (1882); *Seebh. Ibis*, 1883, p. 369; *Blak. Chrysanth.* 1883, p. 27; *id. Amend. List B. Jap.* p. 33 (1884); *Seebh. B. Jap. Emp.* p. 236, note (1890).

Scarcely different from *A. albifrons*; on the average it is larger and has a bigger bill. "Iris very dark brown; bill milky white (becoming flesh-colour some time after death), the anterior part and tomia with a very faint rosy tinge, the posterior part with a hardly perceptible wash of bluish; a square figure on culmen, edges of nostrils, a small spot beneath them, and the basal two-thirds of the lower half of the under mandible cadmium-yellow; naked skin on mental angle and corner of mouth of the same colour, but paler; a stripe along the forehead pale brownish yellow; tail cream-coloured: naked eye-ring dark brownish grey; feet vivid cadmium-yellow; webs somewhat paler and purer yellow; nails horny white" (*Stejneger*). Total length 29 inches, culmen 2·3.

Hab. Northern America (except Greenland), migrating south as far as Mexico and Cuba, and along the E. Asiatic coast to Japan.

a. ♀ ad. sk.	N. America.	Salvin-Godman Coll.
b. Ad. st.	Arctic America.	Capt. Back [P.].
c. Head.	Arctic coast, E. of Ft. Anderson, July (*McFarlane*).	Salvin-Godman Coll.
d. Ad. st.	Repulse Bay.	Dr. Rae [P.].
e. ♂ ad. sk.	Brownsville, Texas, Feb. (*F. B. Armstrong*).	Salvin-Godman Coll.
f. Ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
g. Ad. sk.	N.W. America.	Capt. Collinson [P.].
h–m. ♀ imm., juv., et pull. sk.	St. Michael's, Alaska, June, Aug. (*E. W. Nelson*).	Salvin-Godman Coll.
n. Ad. st.	Japan.	Purchased.
o. Ad. sk.	Yokohama (*H. Pryer*).	Seebohm Coll.
p, *q*. ♂ ad. et juv. sk.	Hakodadi, April, Oct. (*Blakiston*).	Seebohm Coll.

5. Anser erythropus.

Anas erythropus, *Linn. S. N.* i. p. 197, n. 11 (part. et syn. emend.) (1766).

Anser finmarchicus, *Gunner, in Leemii de Lappon. Comm. notis*, p. 264 (1767); *Rchnw. J. f. O.* 1890, p. 81; *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 341 (1890).

Anas albifrons, part., *Gm. S. N.* i. 2, p. 509, n. 64 (1788); *Lath. Ind. Orn.* ii. p. 842, n. 27 (1790); *Vieill. N. D.* xxiii. p. 344 (1818).

Anser albifrons, part., *Bonn. Enc. Méth.* i. p. 114 (1790); *Steph. Gen. Zool.* xii. 2, p. 25 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 461 (1825); *Wright* (*nec Scop.*), *Finl. Fogl.* p. 43 (1859) (*cf. Ibis*, 1861, p. 111).

? Anser erythropus, *Pall. Zoogr. Rosso-As.* ii. p. 225 (1811).*

Anser temminckii, *Boie, Isis*, 1822, p. 882 (Hamburg); *Sehleg. Rev. Crit.* p. cx (1844); *Midd. Reis. O.-Sibir.* ii. p. 228, t. xx. f. 2 (pullus) (1851) (Taimyr R., Boganida); *Pelz. u. Lor. Ann. k. naturh. Hofmus.* iii. p. 58 (1888).

Anser cinereaceus, *C. L. Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 772

* Rostrum pallide rubicundum, pedes rubri (!).

(1824); *id. Isis*, 1830, p. 996: *id. Handb. Naturg. Vög. Deutschl.* p. 845 (1831); *id. Naumannia*, 1855, p. 297; *id. Vogelf.* p. 367 (1855)

Anser brevirostris, *Heckel* (ubi ?) *; *Brehm, Isis*, 1830, p. 996 (descr. nulla); *id. Naturgesch. Vög. Deutschl.* p. 844 (1831); *G. R. Gr. Gen. B.* iii. p. 607, n. 5 (1844); *Rchnb. Syn. Av.*, Natatores, t. 103. ff. 398, 399, 361 (1845); *C. L. Brehm, Naumannia*, 1855, p 297 (= minutus, *Naum.*); *id. Vogelf.* p. 367 (1855).

Anser brevirostris, *Koch* (ubi ?), *fide Fritsch, Vög. Eur.* p. 406, Taf. 45. f. 3 (young), f. 7 (ad.) (1870).

Anser minutus, *Naum. Vög. Deutschl.* xi. p. 364, Taf. 290 (1842); *Nilss. Skand. Fauna, Fogl.* ii. p. 404 (1844); *Kjærb. Danm. Fugle*, p. 355, *Suppl.* pl. 24 (1852); *Schleg. Vog. Nederl.* pl. 283 (1854); *Licht. Nomencl. Av.* p. 101 (1854); *Selys, Naumannia*, 1855, p. 264; *Bp. Compt. Rend.* xliii. p. 648, n. 19 (1856); ? *Antin. J. f. O.* 1858, p. 484 (note, Smyrna); *Schleg. Vog. Nederl.* p. 519. pl. 283 (1858); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 293 (1860); ? *Irby, Ibis*, 1861, p. 247 (Oudh); *Nordm. J. f. O.* 1864, p. 376 (Finland); *Schleg. Mus. P.-B.*, Anseres, p. 111 (1866); *Bree, B. Eur.* iv. p. 137, pl. — (1867); *Sundev. Svenska Fogl.* pl. 57. f. 3 (1872); *Finsch, Ibis*, 1877, p. 62; *id. Verh. z.-b. Ges. Wien*, 1879, p. 200; *Hume, Str. Feath.* viii. p. 114, no. 948 (1879); *Seebh. B. Japan. Emp.* p. 238 (1890).

Marilochen brevirostris, "*Heckel*," *Rchnb. Av. Syst. Nat.* p. ix (1852).

Anser erythropus, *Newt. P. Z. S.* 1860, p. 341; *id. Ibis*, 1860, p. 406; *id. Ann. & Mag. N. H.* (ser. 2) ii. p. 452 (1860); *Swinh. P. Z. S.* 1863, p. 323 (China); *Jerd. B. of Ind.* iii. p. 781 (Oudh) (1864): *Degl. & Gerbe, Orn. Eur.* ii. p. 486 (1867); ? *Saund. Ibis*, 1869, p. 395 (Italy); *Malmgr. J. f. O.* 1870, p. 295; *A. Newt. Pr. Ac. Philad.* 1871, pp. 99, 100 (breeding in Lapland and N. Russia); *Gieb. Thes. Orn.* i. p. 370 (1872); *Blak. & Pryer, Ibis*, 1878, p. 212 (Tokio and Yezo); *Seebh. Ibis*, 1879, p. 22 (Tokio); *Dress. B. of Eur.* vi. p. 383 (pts. 75, 76, 1879); *Hume & Marsh. Game B. of Ind.* iii. p. 78, pl. 11 (1880); *Sclat. P. Z. S.* 1880, p. 500; *Rchnw. Vög. d. zool. Gart.* p. 66 (1882); *Sclat. List Vert. An.* 8th ed. p. 418 (1883); *Saund. Yarrell's Hist. Br. B.* iv. p. 263 (1884–85); *Salvad. El. Ucc. Ital.* p. 252, n. 350 (1886); *Gigl. Icon. Avif. Ital.* tav. 342 bis (pt. xxxv., 1887); *Gingell, Sc. Goss.* 1888, p. 69 (Somerset); *Cecil Smith, ibid.* p. 91; *id. Zoolog.* 1888, pp. 227–229.

Marilochen erythropus, *G. R. Gr. Hand-list*, iii. p. 75, n. 10568 (1871).

Anser pygmæus, *Brehm* (errore), *Gieb. Thes. Orn.* ii. p. 370 (in syn. *A. erythropodis*) (1872).

Anser albifrons minutus, *Seebh. Hist. Brit. B.* iii. p. 505, pl. 62 (egg) (1885); *id. P. Z. S.* 1886, p. 420 (Holy Island).

Anser albifrons, var. erythropus, *Dub. Bull. Mus. R. d'Hist. Nat. de Belg.* iv. p. 19 (1885); *id. Faun. Vert. Belg., Ois.* ii. p. 405 (1891).

Adult. Similar to *A. albifrons*, but much smaller, and with the white of the forehead more extended, reaching a line between the

* Pelzeln and Lorenz (*l. c.*) quote "Isis, 1828, p. 844," which is wrong; p. 844 is that of Brehm's 'Naturgeschichte.'

eyes on the top of the head. Total length about 21 inches, wing 15, tail 4·5, culmen 1·27, tarsus 2·4.

Female smaller than the male, wing about 13·3 inches.

Young birds have no white on the forehead and no black marks on the lower parts.

Hab. Lapland and eastwards, also Siberia; it migrates southwards, and has been found in winter from W. Europe to Japan; also in Northern India.

a. Imm. st.	N. of Europe.	Purchased.
b. Juv. sk.	Ob R. District, Aug.	Dr. Otto Finsch [C.].
c. ♀ ad. sk.	Yenisei, June (*H. S.*).	Seebohm Coll.
d. Imm. sk.	Damietta (*Filipponi*).	Shelley Coll.
e. Juv. st.	Caspian Sea.	Purchased.
f. Ad. sk.	Oudh.	Hume Coll.
g, *h*, *i*. ♂ ♀ ad. sk.	Sultanpur, Gurgaon. March (*W. N. Chill*).	Hume Coll.
k. ♀ ad. sk.	Shaughai, Nov. (*R. Swinhoe*).	Seebohm Coll.
l. ♂ ad. sk.	Tokio, Jan. (*Blakiston*).	Seebohm Coll.
m. Ad. sk.	Yokohama (*H. Pryer*).	Seebohm Coll.
n. Skeleton.		

6. Anser fabalis.

Bean Goose.

Anser sylvestris, *Frisch, Vög. Deutschl.* tab. 155; *Briss. Orn.* vi. p. 265 (1760); *Degl. Orn. Eur.* ii. p. 294 (1849); *Degl. & Gerbe, Orn. Eur.* ii. p. 481 (1867); *Dub. Faun. Vert. Belg., Ois.* ii. p. 398 (1891).

Oca salvatica, *Gerini, Stor. degli Ucc.* v. tav. 591 (1776).

Oie sauvage, *D'Aubent. Pl. Enl.* 985.

Anas anser, *Bodd.* (*nec Linn.*) *Tabl. Pl. Enl.* p. 57, n. 985 (1783) (*ex Pl. Enl.* 985).

Bean Goose, *Lath. Syn.* iii. 2, p. 464, n. 23 (1785).

Anas fabalis, *Lath. Gen. Syn. Suppl.* i. p. 297 (1787).

Anas segetum, *Gm. S. N.* i. 2, p. 512, n. 68 (1788); *Lath. Ind. Orn.* ii. p. 843, n. 28 (1790); *Temm. Man. d'Orn.* p. 527 (1815); *id. op. cit.* 2nd ed. ii. p. 820 (1820); *Ranz. El. di Zool.* iii. pt. 9, p. 89 (1826); *Werner, Atlas*, Palmipèdes, pl. 30 (18—?); *Bp. Specchio Comp.* p. 70, n. 211 (1827).

Anser ferus, *Bonn.* (*nec auct.*) *Enc. Meth.* i. p. 110, n. 7 (excl. *a*, *b*) (1790); *Flem. Brit. Anim.* p. 126 (1828).

Anser segetum, *Bonn. Enc. Méth.* i. p. 116 (1790); *Meyer. Taschenb.* ii. p. 554 (1810); *Vieill. N. D.* xxiii. p. 342 (1818); *Steph. Gen.* xii. 2, p. 26 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 460 (1825); *Roux, Orn. Prov.* pl. 360 (1825); *Bruch, Isis*, 1828, p. 734, Taf. ix. f. 4 (=arvensis, *Naum.*); *Brehm, Isis*, 1830, p. 996; *Less. Tr. d'Orn.* p. 628 (1831); *Savi, Orn. Tosc.* iii. p. 177 (1831); *Gould, B. Eur.* pl. 348 (1837); *Eyt. Mon. Anat.* p 91 (1838); *Bp. Comp. List*, p. 55, n. 399 (1838); *Bartl. P. Z. S.* 1839, p. 2; *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 422 (1842); *Naum. Vög. Deutschl.* xi. p. 300, Taf. 287 (1842); *Schleg. Rev. Crit.* p. cix (1844); *G. R. Gr. Gen. B.* iii. p. 607, n. 2 (1844); *Rchnb. Syn. Av.*, Anseres, tab. 102. ff. 240, 241 (1845); *Harcourt, P. Z. S.* 1851, p. 146 (Madeira); *Midd. Reis. Sibir.* ii. 2, p. 225 (Boganida and Taymir Land) (*nec* p. 227, S.E. Siberia) (1851); *Kjærb. Orn. Dan.* t. 45 (1852); *Naum. Naumannia*, 1853, pp. 5–8, t. 1. ff. D, E, F; *Schleg. Vog. Nederl.* pls. 276, 277 (1854); *Licht. Nomencl.*

Av. p. 100 (1854); *Wallengr. Naumannia*, 1854, p. 267 (Scandinavia); *Schleg. Naumannia*, 1855, p. 262, n. 3; *Bp. Compt. Rend.* xliii. p. 648, n. 13 (1856); *Crisp, P. Z. S.* 1857, p. 215; *G. R. Gr. Cat. Brit. B.* p. 186 (1863); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); ? *Nordm. J. f. O.* 1864, p. 376 (Finland); *Schleg. Mus. P.-B.*, Anseres, p. 112 (part.) (1866); *Eyt. Syn. Anat.* p. 39 (1869); *Fritsch, Vög. Eur.* p. 406, t. 45. f. 6 (1870); *Gillett, Ibis*, 1870, p. 308 (Nova Zembla); *Elwes & Buckl. Ibis*, 1870, p. 338; *Malmgr. J. f. O.* 1870, pp. 281, 289 (Finland and Lapland); *A. Newt. Pr. Ac. Philad.* 1871, pp. 98, 99 (Lapland); *G. R. Gr. Hand-list*, iii. p. 74, n. 10563 (1871); *Heugl. J. f. O.* 1872, p. 121 (Nova Zembla); *Gieb. Thes. Orn.* i. p. 373 (part.)(1872); *Sundev. Svenska Fogl.* pl. 56. f. 4 (1872); *Gould, B. Great Brit.* v. pl. 2 (1873); *Severtz. Turkest. Jevotn.* p. 70 (1873) (Turkestan, migrating through, and wintering); *Dress. Ibis*, 1876, p. 418; *Dress. B. Eur.* vi. p. 363, pl. 412 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 68, pl. 8 (1880); *Sclat. P. Z. S.* 1880, p. 500; *Rchnw. Vög. zool. Gärt.* p. 66 (1882); *Salv. Cat. B. Strickl. Coll.* p. 528, n. 2569 (1882); *B. O. U. List Brit. B.* p. 115 (1883); *Sclat. List Vert. An.* 8th ed. p. 418 (1883); *Radde, Ornis Caucas.* p. 445 (1884); *Tristr. Faun. & Flor. Palest.* p. 113 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 265 (1884–85); *Seebh. Hist. Brit. B.* iii. p. 493, pl. 58 (1885); *Pleske, Rev. Turkest. Ornis*, p. 54 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889); *Rchnw. J. f. O.* 1890, p. 81; *Kolamb. Glasnik. Naravosl. Drüz.* vi. p. 168 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 291 (1891).

Anas (*errore pro* Anser) segetum, *Bechst. Naturg. Deutschl.* 2nd ed. iv. p. 883, n. 2 (1801).

Anser rufescens, *C. L. Brehm, Beitr. Vogelk.* iii. p. 871 (1822); *id. Isis*, 1830, p. 996; *id. Vög. Deutschl.* p. 838, n. 3 (1831); *id. Naumannia*, 1855, p. 297 (=segetum, *Naum.*); *id. Vogelf.* p. 366 n. 3 (1855).

Anser platyuros, *C. L. Brehm, Isis*, 1830, p. 996 (descr. nulla); *id. Vög. Deutschl.* p. 837 (1831); *id. Naumannia*, 1855, p. 297; *id. Vogelf.* p. 366, n. 1 (1855).

Anser arvensis, *C. L. Brehm, Isis*, 1830, p. 996 (descr. nulla); *id. Vög. Deutschl.* p. 839 (1831); *Naum. Vög. Deutschl.* xi. p. 277, t. 286 (1842); *Rchnb. Syn. Av.*, Natatores, t. 103. ff. 959, 960 (1845); *Naum. Naumannia*, 1853, pp. 5–8, t. i. ff. A, B, C; *id. ibid.* 1855, p. 297; *Selys-L. Naumannia*, 1855, p. 262, n. 2; *C. L. Brehm, Vogelf.* p. 366, n. 4 (1855); *Bp. Compt. Rend.* xliii. p. 648, n. 12, p. 1025 (1856); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 291 (1860); *Fritsch, Vög. Eur.* p. 407, t. 45. f. 4 (1870); *Rchnw. J. f. O.* 1890, p. 81.

? Anser obscurus, *C. L. Brehm, Isis*, 1830, p. 996 (1831); *id. Handb. Vög. Deutschl.* p. 839 (1831); *id. Naumannia*, 1855, p. 297 (=brachyrhynchus, *Baill.*!); *id. Vogelf.* p. 367 (1855); *Severtz. Turkest. Jevotn.* p. 70 (1873); *id. J. f. O.* 1875, p. 184; *Dress. Ibis*, 1876, p. 418; *Severtz. Zeitschr. ges. Orn.* 1887, p. 22.

? Anser paradoxus, *C. L. Brehm, Naumannia*, 1855, p. 297; *id. Vogelf.* p. 367 (1855).

? Anser leuconyx, *Selys-L. Naumannia*, 1856, p. 398; *Gieb. Thes. Orn.* i. p. 372 (1872).

? Anser arvensis *a.* leuconyx, *Bp. Compt. Rend.* xliii. p. 648 (1856).

Anser paludosus, *Strickl. Rep. Brit. Assoc. Adv. Sc.*, 28 *Meet.* 1858, pp. 131, 132; *id. Ann. & Mag. N. H.* (3) iii. p. 124, pl. 4. f. 1 (1859); *Bartl. P. Z. S.* 1861, p. 19 (note).

Anser palustris (?) (*errore*), *Parker, P. Z. S.* 1863, p. 517; *Gieb. Thes. Orn.* i. p. 374 (1872).

Adult male. Head and neck greyish brown; a few whitish feathers on the base of the bill; back and scapulars dark brown, slightly tinged with grey, each feather margined with greyish white; rump blackish brown; upper tail-coverts white; breast pale greyish brown, changing into white on the abdomen, vent, and under tail-coverts; flanks brown, with pale edgings to the feathers; wings brown, more greyish on the bend of the wing, bastard-wing, primary-coverts, and base of the primaries; wing-coverts, secondaries, and tertials edged with white; under wing-coverts ash-brown: bill with the nail, edges, and base black, the middle portion deep orange; irides dark brown; feet orange, claws black. Total length 34 inches, wing 19, tail 6·5, bill 2·4, tarsus 2·6.

Female similar to the male, but somewhat smaller.

Young birds of the year are rather darker in the general colour of their plumage, the markings are less distinct, and there is a tinge of tawny colour about the neck.

Hab. Western Palæarctic Region, breeding in Northern Russia and Lapland, migrating to the basin of the Caspian, wintering in all Europe and Northern Africa; has occurred as far south as Madeira.

a, *b*, *c*. ♂ ad. et ad. st.	Gt. Britain.	Purchased.
d. Pull. st.	Zoological Gardens (*Bartlett*).	Purchased.
e. Ad. sk.	Edinburgh, Jan.	Hume Coll.
f. Ad. sk.		Salvin-Godman Coll.
g. Ad. sk.	England (?), Leadenhall Market.	Hume Coll.
h. Ad. sk.	Norfolk, Jan.	Salvin-Godman Coll.
i. Ad. sk.	Nova Zembla, July (*Capt. Markham*).	Feilden and Harvie-Brown Coll.
k. ♀ ad. head, neck, & legs.	Petchora (*H. S.*).	Seebohm Coll.
l. ♀ ad. sk.	Yen-e-say, Siberia, lat. 66½°, May (*H. S.*).	Seebohm Coll.
m, *n*, *o*. Skeletons.		

Hybrids.

Anser fabalis × *A. ferus.*

p. ♀ ad. sk.	Northrepps, Norwich, April.	J. H. Gurney, Esq. [P.].

Anser fabalis × *A. albifrons.*

q, *r*. ♂ ♀ juv. sk.	Lilford Aviaries, Aug.	Lord Lilford [P.].

7. Anser serrirostris.

a. serrirostris.

Anser segetum, *Midd.* (*nec Gm.*) *Sibir. Reise*, ii. 2, p. 227 (var. S.E. Siberia) (1851); *Schrenck, Reis. Amur-L.* p. 463 (1860); *Swinh. Ibis*, 1860, p. 67, 1861, p. 344, 1862, p. 253; *id. P. Z. S.*

1863, p. 323; *Radde, Reis. S. O.-Sibir.* ii. p. 356 (1863); *Swinh. Ibis*, 1867, p. 392; *Dyb. & Parrex, J. f. O.* 1868, p. 338 (Dauria); *Swinh. Ibis*, 1875, p. 456 (part.); *Prjev. in Rowl. Orn. Misc.* ii. p. 95 (1878); *Blak. & Pryer, Ibis*, 1878, p. 212 (part.); *id. Tr. As. Soc. Jap.* viii. p. 182 (part.) (1880), x. p. 94 (part.) (1882); *Blak. Chrysanth.* 1883, p. 27 (part.); *id. Amend. List B. Jap.* p. 8 (1884); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; ? *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Seebh. B. Jap. Emp.* ii. p. 236 (1890).

Anser serrirostris, *Gould, MS.*; *Seebh. Ibis*, 1884, p. 269 (Central China).

Anser segetum, var. serrirostris, *Swinh. P. Z. S.* 1871, p. 417 (China); *Dyb. J. f. O.* 1873, p. 108; *Tacz. Orn. Faun. Yost. Sibir.* p. 67 (1872); *id. Bull. Soc. Zool. Fr.* ii. p. 42, n. 373 (1877).

Anser segetum serrirostris, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 144 (note) (1885); *Seebh. Hist. Br. B.* iii. p. 494 (East. form) (1885); *id. B. Jap. Emp.* ii. p. 236 (part.) (1890).

b. middendorffi.

Anser grandis, *Midd.* (*nec Gm.*) *Bull. phys.-math. Ac. Pétersb.* iii. no. 19, p. 298 (1844); *id. Reise Sibir.* ii. 2, p. 225, n. 162, Taf. xx. f. 1 (head) (Boganida) (1851); *Schrenck, Reis. Amur-L.* i. p. 462 (1860); *Radde, Reis. S.O.-Sibir.* ii. p. 354 (1860); *Schleg. P.-B.*, Anseres, p. 114 (1866); *Dyb. & Parrex, J. f. O.* 1868, p. 338; *Gieb. Thes. Orn.* i. p. 371 (part.) (1872); *Elwes, P. Z. S.* 1873, p. 649; *Tacz. J. f. O.* 1873, p. 108, 1874, p. 336, 1875, p. 256; ? *Przew. Mong. et Pays des Tang.* ii. p. 150 (Lac Chanka) (1876); *Tacz. Orn. Faun. Yost. Sibir.* p. 67 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 42, n. 42 (1877); *Prjev. in Rowl. Orn. Misc.* ii. p. 96 (Lake Hanka) (1878); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 343 (1883); *Seebh. Ibis*, 1884, p. 269; *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 341 (E. Siberia) (1890).

? Anser, sp., *Bp. Extr. Compt. Rend.* t. xliii. p. 43 (note) (Lake Baikal) (1856).

Anser middendorffi, *Severtz. Turkest. Jevotn.* pp. 70, 149 (1873); *id. J. f. O.* 1874, p. 435, 1875, p. 184; *Dress. Ibis*, 1876, p. 416; *Severtz. Zeitschr. ges. Orn.* 1887, pp. 22, 140; *Sclat. P. Z. S.* 1880, p. 500.

Anser segetum, var. serrirostris, *Tacz.* (*nec Swinh.*) *J. f. O.* 1874, p. 333; *Pleske, Rev. Turkest. Ornis*, p. 54 (1888).

Anser segetum, *Swinh. Ibis*, 1875, p. 456 (part.); *Blak. & Pryer, Ibis*, 1878, p. 212 (part.); *id. Tr. As. Soc. Jap.* viii. p. 182 (part.) (1880), x. p. 94 (part.) (1882); *Blak. Chrysanth.* 1883, p. 27 (part.); *id. Amend. List B. Jap.* p. 8 (part.) (1884).

Anser segetum middendorffi, *Stejn. Bull. U.S. Nat. Mus.* no. 29, pp. 141, 317, pl. vii. f. 1 (head) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 134 (Bering I.) (1887).

Anser segetum serrirostris, part., *Seebh. Hist. Br. B.* iii. p. 494 (1885); *id. B. Japan. Emp.* p. 236 (part.) (1890).

Very similar to *A. fabalis*, but larger, and especially remarkable for its large beak and feet, the former measuring from the frontal feathers to the tip from 2·4 to 3·15 inches; in the first specimen mentioned below, which is the largest, the colour of the head and neck is buffish brown, whilst in the others, as in the western form (*A. fabalis*), it is brownish grey.

It is quite possible that two distinct forms are included under *A. serrirostris*—one larger, with the culmen 3·15 inches long, and with the head and neck buffish brown (*A. middendorffi*), and the other smaller, much more like *A. fabalis*, but larger and with the bill much thicker (*A. serrirostris*). I have not seen a sufficient number of specimens to make up my mind on the subject.

Hab. Eastern Siberia, from Boganida eastwards; in winter China and Japan.

a. ♂ ad. sk.	Tunka, Amoor-land, May (*G. Radde*).	Seebohm Coll.
b. Ad. st.	E. Siberia.	J. F. Brandt [P.].
c. Ad. sk.	Chinkiang, China, Feb.	F. W. Styan, Esq. [P.].
d. ♂ ad. sk.	Ningpo, Dec. (*R. Swinhoe*).	Seebohm Coll.
e. ♂ ad. sk.	Hakodadi, Oct. (*Blakiston*).	Seebohm Coll.
f. Ad. sk.	Yokohama (*H. Pryer*).	Seebohm Coll.

8. Anser brachyrhynchus.

Pink-footed Goose.

Anser brachyrhynchus, *Baill. Mém. Soc. R. d'Abbev.* 1833, p. 74; *id. Cat.* p. 26, n. 248 (183–?); *id. P. Z. S.* 1839, p. 134; *Temm. Man. d'Orn.* 2nd ed. iv. p. 520 (1840); *Rep. Comm. Z. S.* 1841, p. 14; *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 421 (1842); *Jardine, Natur. Libr.* xxvii. p. 70 (1843); *Yarr. Hist. Brit. B.* 2nd ed. iii. p. 153 (1845); *Schleg. Rev. Crit.* p. cx (1844); *G. R. Gr. Gen. B.* iii. p. 607, n. 6 (1844); *Blyth, Cat. B. Mus. A. S. B.* p. 301, n. 1756 (Punjab?)(1849); *Middend. Sibir. Reis.* ii. 2, p. 227 (St. Petersburg) (1851); *Schleg. Vog. Nederl.* pls. 278, 279 (1854); *id. Naumannia*, 1855, pp. 254, 257; *Selys, Naumannia*, 1855, p. 262, n. 4; *Yarr. Hist. Brit. B.* 3rd ed. iii. p. 158 (1856); ? *Irby, Ibis*, 1861, p. 247 (Alumbag, Oudh); *G. R. Gr. Cat. Brit. B.* p. 187 (1863); *Jerd. B. of Ind.* iii. p. 780 (1864); *A. Newt. P. Z. S.* 1864, p. 498 (Spitsbergen); *id. Ibis*, 1864, p. 132 (Ireland), 1865, pp. 209, 513 (Spitsbergen); *More, Ibis*, 1865, p. 441; *Degl. & Gerbe, Orn. Eur.* ii. p. 482 (1861); *Collett, Saersh. aft. of Vid. Selsk. Forh.* p. 175 (Norway) (1868); *A. Newt. Ibis*, 1869, p. 226; *Eyt. Syn. Anat.* p. 38 (1869); *Malmgr. J. f. O.* 1870, p. 260; *Heugl. J. f. O.* 1871, p. 104 (Spitsbergen); *A. Newt. Pr. Ac. Philad.* 1871, pp. 98, 99; *G. R. Gr. Hand-list*, iii. p. 74, n. 10564 (1871); *Gould, B. Gr. Brit.* v. pl. 31 (pt. xix., 1871); *Sundev. Svensk. Fogl.* pl. 82. f 1 (1872); *Dress. B. Eur.* vi. p. 369, pl. 413 (pts. 71, 72, 1878); *Hume, Str. Feath.* viii. p. 114, n. 946 (1879); *Hume & Marsh. Game B.* iii. p. 71, pl. 9 (1880); *Sclat. P. Z. S.* 1880, p. 500; *Elwes, Ibis*, 1880, p. 314 (Jutland); *Rchnw. Vög. zool. Gärt.* p. 66 (1882); *Nordensk. Die Umsegelung As. u. Eur.* i. p. 109 (1882); *B. O. U. List Br. B.* p. 116 (1883); *Bolau, J. f. O.* 1883, p. 76, & foll. (Germany); *Gaetke, ibid.* p. 80 (Heligoland); *Sclat. List Vert. An.* 8th ed. p. 417 (1883); *Tegetm. P. Z. S.* 1884, p. 176; *Saund. Yarrell's Br. B.* iv. p. 270 (1884–85); *Seebh. Hist. Br. B.* iii. p. 498, pl. 60 (1885); *Collett, Suppl. til Norges Fugle*, p. 7; ? *McLeod, Str. Feath.* x. p. 168 (Punjab) (1887); *Tristr. Cat. Coll. B.* p. 57 (1889); *Stuxb. Œfv. Ak. Förh.* 1889, pp. 209–211 (Sweden); *Seebh. B. Jap. Emp.* ii. p. 236 (note) (1890); *Rchnw. J. f. O.* 1890, p. 81; *Dub. Faun. Vert. Belg., Ois.* ii. p. 401 (1891).

? Anser brevirostris, *Thien. (nec Heckel), Fortpfl. Vög. Eur.* pt. v. p. 28 (1838)(egg!); *K. & B. Wirbelth. Eur.* p. lxxxiii (note) (1840).

Anser phœnicopus, *Bartl. P. Z. S.* 1839, p. 3; *Yarr. Hist. Br. B.* iii. p. 64, with fig. (1843), i. Introd. p. xi (1843); *Bartl. P. Z. S.* 1861, p. 19.

Anser segetum, *Naum.* (*nec Gm.*) *Vög. Deutschl.* xi. p. 287, t. 287 * (1842); ? *id. Naumannia*, 1853, pp. 5–8, t. i. ff. D, E, F; *Strickl. Ann. & Mag. N. H.* (3) iii. pp. 122, 124, pl. iv. ff. 2, 3 (1859); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1863, p. 189 (Spitsbergen); *id. J. f. O.* 1863, p. 378 (Spitsbergen); *Schleg. Mus. P.-B.*, Anseres, pp. 112, 113 (part.) (1866); *Gieb. Thes. Orn.* i. p. 373 (part.) (1872).

Anser segetum *a.* brachyrhynchus, *Bp. Compt. Rend.* xliii. p. 648, n. 13 *a* (1886).

Anser ferus, *Evans & Sturge* (*nec auct.*), *Ibis*, 1859, p. 172 (Spitsbergen).

Anser cinereus, *Thorell* (*nec Meyer*), *Philos. Mag. Med. Kandid.* p. 61 (1859); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1863, p. 115 (Spitsbergen).

Anser segetum *v.* brachyrhynchus, *Malmgr. l. c.* pp. 396, 412; *id. J. f. O.* 1865, p. 210.

Anser rufescens, *Palm.* (*nec Brehm*), *Finl. Fogl.* ii. p. 339 (1872).

Very similar to *A. fabalis* (=*segetum*), from which it differs in being smaller and in having the bill shorter, the legs and feet and middle portion of the bill pink, instead of orange. Wing about 16 inches, culmen 1·7, tarsus 2·2.

Hab. Spitsbergen, where it nests, and probably also Franz Joseph Land; during the migration and in winter in N.W. Europe; occasionally it strays to Germany, Belgium, and France; its alleged occurrence in India requires further evidence.

a. Ad. st.	Great Britain (*A. D. Bartlett*). (Probable type of *Anser phœnicopus*, Bartl.)	Purchased.
b, c, d. Ad. st.	Great Britain (*Leadenhall Market*).	Purchased.
e. ♀ ad. sk.	Edinburgh, Jan.	Hume Coll.
f. ♀ ad. sk.	Wells, Norfolk, Oct.	R. B. Sharpe, Esq. [P.].
g. Ad. sk.	Lincolnshire (*J. H. Gurney*).	Hume Coll.
h. Ad. st.	Lancashire.	J. E. Harting, Esq. [P.].
i–m. ♂ ♀ ad. sk.	Holland, Jan.	H. J. Pike, Esq. [P.].
n. ♂ ad., skel.	Holland.	H. J. Pike, Esq. [P.].
o. Skeleton.		
p. Sterna.		A. D. Bartlett, Esq. [P.].
q. Sternum.	England.	John Ray, Esq. [P.].

Subgen. **EULABEIA**.

Type.

Eulabeia, *Rchnb. Av. Syst. Nat.* p. ix (1852) ..... A. indicus.
Eulabea, *Bp. Compt. Rend.* xliii. p. 648, gen. 7 (1856).
Eulabia, *Newt. Dict. of Birds*, p. 374 (pt. 2, 1893).

Range. Confined to Central Asia and India.

* Feet yellow!

9. Anser indicus.

Barred-headed Goose, *Lath. Syn. Suppl.* i. p. 277 (1787).
Anas indica, *Lath. Ind. Orn.* ii. p. 839, n. 20 (1790).
Anser undulata, *Bonn. Enc. Méth.* i. p. 114 (1790) (*ex Latham*).
Anser melanocephalus, *Vieill. N. D.* xxiii. p. 332 (1818); *Dum. Dict. Sc. Nat.* xxv. p. 460 (1825).
Anser indica, *Steph. Gen. Zool.* xii. 2, p. 36 (1824); *Gould, Cent. Him. B.* pl. 80 (1831).
Anser indicus, *Sykes, P. Z. S.* 1831, p. 125; *Eyt. Mon. Anat.* p. 90 (1838); *Vig. P. Z. S.* 1831, p. 173; *Jerd. Madr. Journ.* xii. p. 217, n. 375 (1840); *Hodgs. in Gray's Zool. Misc.* p. 86, n. 593 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844); *id. Cat. Hodgs. Coll. B. M.* p. 144 (1846); *Licht. Nom. Av.* p. 101 (1854); *Jerd. B. of Ind.* iii. p. 782 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 114 (1866); *Blyth, Ibis*, 1867, p. 175; *Beav. Ibis*, 1868, p. 401 (Umballah); *Eyt. Syn. Anat.* p. 37 (1869); *Gieb. Thes. Orn.* i. p. 371 (1872); *Hume, Str. Feath.* 1878, p. 260; *Adam, t. c.* p. 401; *Hume, Nests & Eggs*, p. 636 (1873); *Butl. Str. Feath.* iv. pp. 27, 40 (Sindh), p. 499 (1876); *Dress. Ibis*, 1876, p. 419 (=skorniakovi); *Hume, Str. Feath.* iv. p. 499 (juv.) (1876); *Przew. Mongolie*, ii. pp. 151, 170, n. 256 (1876); *Prjev. in Rowl. Orn. Misc.* iii. p. 97 (Lake Koko-nor) (1878); *Anders. West Yunn.* ii. p. 698 (1878); *Hume, Str. Feath.* vii. p. 491 (Calcutta) (1879), viii. p. 114, n. 949 (1879); *Sclat. P. Z. S.* 1880, p. 500; *Hume & Marsh. Game B. of Ind.* iii. p. 81, pl. 12 (1880); *Bidd. Ibis*, 1881, p. 99; *Rchnw. Vög. d. Zool. Gärt.* p. 66 (1882); *Salv. Cat. B. Strickl. Coll.* p. 528 (1882); *Sclat. List Vert. An.* 8th ed. p. 418 (1883); *Severtz. Ibis*, 1883, p. 76 (Pamir range); *B. O. U. List Br. B.* p. 116 (1883); *Przew. Reis. in Thibet*, pp. 64, 226 (1884); *Sclat. P. Z. S.* 1886, p. 320 (breeding, Zool. Gard. Rotterd.); *Kimberg, Zool. Gart.* 1886, p. 324 (Shamin); *Pleske, Rev. Turkest. Ornis*, p. 54 (1888); *Tristr. Cat. B.* p. 51 (1889); *Hume, Nests & Eggs* (*Oates' ed.*), iii. p. 279 (1890); *Hartert, Kat. Vogelsamml.* p. 227, no. 3359 (1891); *Sharpe, Sec. Yark. Miss., Aves*, p. 128 (1891); *Pleske, Mél. Biol.* xiii. p. 298, n. 167 (1892); *Newt. Dict. of B.* p. 373 (pt. 2, 1893); *Oust. Nouv. Arch. Mus.* (3) vi. p. 97 (1894).
Bernicla indica, *G. R. Gr. Gen. B.* iii. p. 608, n. 15 (1844); *Rchnb. Syn. Av.*, Natatores, t. 101. ff. 951–52 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 301, n. 1757 (1849); *Adams, P. Z. S.* 1858, p. 509 (Indus & Punjab).
Eulabeia indica, *Rchnb. Av. Syst. Nat.* p. ix (1852); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76 (1863); *id. Hand-list*, iii. p. 75, n. 10569 (1871); *Tacz. Bull. Soc. Zool. de Fr.* ii. p. 43 (Lake Baikal) (1877); *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 341 (1890).
Eulabæa indica, *Bp. Compt. Rend.* xliii. p. 648, n. 11 (1856).
Anser skorniakovi, *Severtz. Turkest. Jevotn.* pp. 70, 149, pl. x. ff. 3, (ad.) 4 (pull.) (Turkestan) (1873); *id. J. f. O.* 1873, pp. 346, 377, 386, 1875, pp. 80, 100, 184; *id. Zeitschr. ges. Orn.* 1887, p. 137.
Eulabeia indicus, *Ball, Str. Feath.* 1874, p. 436.

Adult. Head white, with two horse-shoe blackish bars on the occiput and nape; hind-neck brown-black; a longitudinal white band on the sides of the neck; upper plumage very pale ashy, the feathers

edged with whitish and tinged with brown on the mantle and scapulars; sides of the rump and upper tail-coverts whitish; throat white, fore-neck brownish ashy, passing gradually into cinereous on the breast, whitish on the abdomen; vent and under tail-coverts white; feathers of the flanks brown, rufous towards the tips with pale edgings; quills grey, dusky towards the tips, and gradually becoming darker towards the secondaries; tertials brownish grey; tail grey, white-tipped: "bill yellow; irides brown; legs orange" (*Jerdon*). Total length 27 inches, wing 17, tail 6, bill 2, tarsus 2·75.

Young. Forehead brownish white, a little tinged with rusty; a dusky line through the lores to the eye; whole crown, occiput, and nape sooty or dusky black; no trace of either the two distinct black head-bars or the conspicuous white neck-streaks; back of neck wood-brown, sides and front of the lower part of the neck pale dusky greyish, mottled with whitish; most of the feathers of the breast and abdomen have a pale rusty tinge towards the tips; the conspicuous dark banding of the flanks of the adults is almost entirely wanting; tail somewhat browner than in the adult.

Young in down. Pale yellowish, top of the head and upper parts pale brown.

Hab. Central Asia and Northern India; rarely in Southern India (*Jerdon*).

a, b. ♀ ad. sk.	Koko-nor, Mareh (*Prjevalsky*).	H. Seebohm, Esq. [P.].
c. Ad. st.	N. India.	Col. Cobb's Coll.
d. Ad. st.	India.	Hardwicke Beq.
e, f. Ad. sk.	N.W. India.	Capt. S. Pinwill [P.].
g. Ad. sk.	Ladak (*Strachey*).	India Museum [P.].
h. Ad. sk.	Kumaon (*Strachey*).	India Museum [P.].
i. ♀ ad. sk.	River Chenab, Dec. (*A.O. H.*).	Hume Coll.
k. Ad. sk.	Murdan, March.	Hume Coll.
l. ♀ ad. sk.	Sambhur (*R. M. Adam*).	Hume Coll
m–r. Ad. sk.	Gurgaon, Feb. (*W. N. Chill*).	Hume Coll.
s. Ad. sk.	Delhi, Punjaub, Feb.	Hume Coll.
t, u, v. Ad. sk.	Etawah.	Hume Coll.
w, x. ♂ ♀ ad. sk.	Allahabad, Oct., Jan. (*A. O. H.*).	Hume Coll.
y. Ad. sk.	Oudh.	Tweeddale Coll.
z, a'. Ad. sk.	Oudh, Jan., Feb.	Hume Coll.
b'. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
c'. Ad. sk.	Nepal (*Hodgson*).	India Museum [P.].
d'. Ad. sk.	Int. of Native Sikhim, May (*L. Mandelli*).	Hume Coll.
e'. Juv. sk.	Native Sikhim, Nov. (*L. Mandelli*).	Hume Coll.
f', g'. Ad. et pull. sk.	Thibet, May, June.	Hume Coll.
h'. Ad. sk.	Dacca.	Hume Coll.
i'. Skeleton.		

16. CYGNOPSIS.

Type.

Cygnopsis, *Brandt, Bull. Ac. Pétersb.* 1836, i. p. 37 ; *id. Descr. et Icon. Anim. Ross. Nov.* p. 5 (1836) ..... C. cygnoides.
Cycnopsis, *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890) (*nom. emend.*).

Range. Eastern Asia.

1. Cygnopsis cygnoides *.

Anas cygnoides, *Linn. Faun. Suec.* p. 108 (1746) ; *id. S. N.* i. p. 194, n. 2 (1766) ; *Gm. S. N.* i. 2, p. 502, n. 2 (1788) ; *Lath. Ind. Orn.* ii. p. 837, n. 16 (1790) ; *Less. Tr. d'Orn.* p. 628, n. 17 (1831).
Anas cygnoides australis, *Linn. S. N.* ed. 10, gen. 61, sp. 2 (1758).
Anas cygnoides orientalis, *Linn. l. c.* sp. 2, var. 1 (1758) (domesticated).
Anser moscoviticus, *Briss. Orn.* iv. p. 278 (1760).
Anser gnineensis, *Briss. l. c.* p. 280 (1760) ; *Eyt. Mon. Anat.* p. 94 (1838) ; *id. Syn. Anat.* p. 42 (1869).
Anas cygnoides *a.* australis, *Linn. S. N.* i. p. 194 (1766).
Anas cygnoides *β.* orientalis, *Linn. ibid.*
Anser cygnoides, *Pall. Reise*, iii. p. 700, n. 32 (1776) ; *Bonn. Enc. Méth.* i. p. 101, n. 5 (1790) ; *Pall. Zoogr. Rosso-As.* ii. p. 218, tab. lxiv. (1811) ; *Vieill. N. D.* xxiii. p. 337 (1818) ; *Dumont, Dict. Sc. Nat.* xxxv. p. 466 (1825) ; *Boie, Isis*, 1826, p. 981 ; *Eyt. Mon. Anat.* pl. 5 (skeleton), App. 1, 2 (1838) ; *G. R. Gr. Gen. B.* iii. p. 607, n. 8 (1844) ; *Blyth, Cat. B. Mus. A. S. B.* p. 306, n. 1754 (1849) ; *Temm. & Schleg. Faun. Japon., Aves*, p. 125 (1850) ; *Radde, Beitr. z. Kennt. Russ. Reich.* xxxiii. p. 216 (1861) ; *Swinh. Ibis*, 1861, p. 344 ; *id. P. Z. S.* 1863, p. 323 (N. China) ; *Schleg. Mus. P.-B.*, Anseres, p. 106 (1866) ; *Sclat. P. Z. S.* 1869, p. 629 (breeding) ; *Cab. v. d. Deck. Reis.* iii. p. 51 (1869) ; *Blyth, Ibis*, 1870, p. 176 ; *David, Nouv. Arch. Mus., Bull.* vii. *Cat.* n. 439 (1871) ; *Swinh. P. Z. S.* 1871, p. 416 ; *Gieb. Thes. Orn.* i. p. 370 (1872) ; *Severtz. Turkest. Jevotn.* p. 70 (1873) ; *Elwes, P. Z. S.* 1873, p. 649 ;

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* I have not been able to identify satisfactorily the following species, which may be the same as *C. cygnoides* in the wild state :—

ANSER GRANDIS.

Great Goose, *Penn. Arct. Zool.* ii. p. 570 (1785) ; *Lath. Syn.* iii. 2, p. 446, n. 11 (1785).
Anas grandis, *Gm. S. N.* i. 2, p. 504, n. 53 (1788) ; *Lath. Ind. Orn.* ii. p. 837, n. 15 (1790).
Anser grandis, *Bonn. Enc. Méth.* i. p. 110 (1790) ; *Pall. Zoogr. Rosso-As.* ii. p. 221 (1811 : Lena, Camschatka, Anadyr River) (*ex Gmelin, Sen.*) ; *Vieill. N. D.* xxiii. p. 345 (1818) ; *Steph. Gen. Zool.* xii. 2, p. 35 (1824) ; *Dum. Dict. Sc. Nat.* xxxv. p. 473 (1825) ; *Bp. Compt. Rend.* xliii. p. 648, n. 14 (1856) ; *G. R. Gr. Hand-list*, iii. p. 74, n. 10552 (1871) ; *Gieb. Thes. Orn.* i. p. 31 (part.) (1872) ; *Severtz. Ibis*, 1876, p. 417 (=cygnoides).
Bernicla ? grandis, *G. R. Gr. Gen. B.* iii. p. 608, n. 16 (1844).

"Of a very large size ; bill black, base tawny ; body dusky, underparts white ; legs scarlet" (*ex* Penuant).
Hab. Siberia.

Dress. Ibis, 1876, p. 418; *David & Oust. Ois. Chine*, p. 493 (1877); *Prjev. in Rowley's Orn. Misc.* ii. p. 97 (1878); ? *Finsch, Verh. k. z.-b. Ges. Wien*, 1879, p. 258 (W. Siberia); *Sclat. P. Z. S.* 1880, p. 501, n. 14; *id. List Vert. An.* 8th ed. p. 418, n. 953 (1883); *Seebh. Ibis*, 1884, p. 32 (Yokohama); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22; *Seebh. B. Jap. Emp.* p. 285 (1890); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 292 (1891); *Brandt, J. f. O.* 1891, p. 267.

Oie de Guinée, *D'Aubent. Pl. Enl.* 347; *Buff. Hist. Nat. Ois.* ix. p. 72, pl. 3 (1783).

Chinese Goose, *Lath. Syn.* iii. 2, p. 447, n. 12 (1785).

Anas orientalis, *Gm. S. N.* i. 2, p. 503, n. 2 β (1788).

Cygnus sinensis, *Steph. Gen. Zool.* xii. 2, p. 22, pl. 40 (1824).

Cygnopsis cygnoides, *Brandt, Bull. Ac. Pétersb.* 1836, i. p. 37; *id. Descr. & Ic. An. Ross. Nov., Aves*, fasc. i. p. 5 (1836); *G. R. Gr. List Gen. B.* p. 73 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 59, n. 415 (1842); *Strickl. P. Z. S.* 1842, p. 166 (Chinese); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Rchnb. Syn. Av.*, Anseres, t. 105. ff. 249–50 (1845); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 9 (1856); *G. R. Gr. Hand-list*, iii. p. 75, n. 10574 (1871); *Sund. Met. nat. Av. disp. Tent.* p. 145 (1872); *Dyb. J. f. O.* 1873, p. 108 (E. Siberia), 1874, p. 336; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 43 (1877); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Bering I.) (1887); *Tacz. P. Z. S.* 1888, p. 460 (Corea).

Anser cygnoides ferus, *Temm. & Schleg. Faun. Japon., Aves*, tab. 81 (1850).

Cygnopsis ferus, *Rchnb. Syn. Av.* n. iv. *Novit.* Natatores, t. ccclliii. f. 2773 (*ex Faun. Jap.*) (1850).

Cygnopsis guineensis, *Rchnb. Av. Syst. Nat.* p. x (1852).

Cygnopsis cygnoides *a.* australis, *Bp. Compt. Rend.* xliii. p. 648 (1856).

Anser (Cygnopsis) cygnoides, *Schrenck, Vög. d. Am.-L.* pp. 457–461, Taf. xv. (1860); *Radde, Reise S. O.-Sibir.* ii. p. 350 (1863).

Anser sinensis, *Sclat. P. Z. S.* 1863, p. 234; *Rchnw. Vög. d. Zool. Gärt.* p. 67 (1882).

Anser grandis, *Finsch* (*nec Gm.*), *Ibis*, 1877, p. 53.

Anser tuberculosus, *Schuster, Gefied. Welt.* 6 Jahrg. 1877, pp. 378–379.

Cygnopsis cygnoides, *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Hybrid.

Anas cygneides hybrida, *Rchnb. Av. Syst. Nat.*, Anseres, t. 110. f. 983 (1845).

Adult male. Round the base of the bill a rusty white band; upper part of the head and a band along the hind-neck dark brown, cheeks and neck whitish; a brown mark on the lower part of the cheeks along the under mandible; back and wings greyish brown, with pale edgings to the feathers; rump greyish brown; longest upper tail-coverts white; breast buffish white, changing into white on the abdomen and under tail-coverts; the feathers of the breast with narrow rusty edges: flanks brown, with pale edgings to the feathers; anterior upper wing-coverts, base of the primaries, and under wing-coverts grey; tail brown-grey, with the feathers broadly tipped and edged with white: bill black; feet orange; irides

reddish brown. Total length about 36 inches, wing 17·5, tail 7, bill 3·5, tarsus 2·9.

Female. Similar to the male.

In the domesticated state this Goose has the bill red, much shorter, and with a large frontal knob.

Hab. Breeds in Eastern Siberia and winters in China; apparently resident in Japan; has been recorded from the Kurile Islands.

a. ♂ ad. sk.	Amoorland, April (*Radde*).	Seebohm Coll.
b, c. ♀ ad. sk.	Shanghai, March, Nov. (*R. Swinhoe*).	Seebohm Coll.
d. ♂ ad. sk.	Shanghai, Nov. (*R. Swinhoe*).	H. J. Elwes, Esq. [P.].
e. Ad. sk.	Yokohama, Japan (*Owston*).	Capt. Blakiston [P.]. Zool. Garden.
f, g. Ad. st. et pull. (dom. var.).		
h. Ad. st.	Liphook, Hants (dom. var.).	T. Butler, Esq. [P.].
i. Skeleton (dom. var.).		Eyton Coll.
k. Skeleton (dom. var.).		

Hybrid C. cygnoides (domestica) × Bernicla canadensis.

l. Ad. sk.	Domestic.	H. J. Elwes, Esq. [P.].

17. PHILACTE.

	Type.
Philacte, *Bannister, Pr. Ac. Nat. Sc. Philad.* 1870, p. 131	P. canagica.

Range. North-east Asia and North-west America.

1. Philacte canagica.

Anas canagica, *Sevastianoff, Nova Acta Ac. St. Petersb.* xiii. p. 346, pl. x (1800).

Anser pictus, *Pall.* (*nec Bonnaterre*) *Zoogr. Ross.-As.* ii. p. 233 (syn. emend.), tab. 67 (1811); *Schleg. Handl. Dierk.* i. p. 458 (1857); *Nordensk. Voy. of the Vega*, ii. p. 42 (Chuck Peninsula) (1881); *Palmén, Gt. Intern. Fish. Exh. Lond., Sweden, Spec. Cat.* p. 200 (1883).

Anser canagicus, *Brandt, Bull. Ac. St. Pétersb.* i. p. 37 (1836); *id. Descr. et Icon. Anim. Ross.* i. p. 7, tab. 1 (1836); *Schleg. Dierent.* p. 278 with fig. (1864); *id. Mus. P.-B.*, Anseres, p. 115 (1866); *Finsch, Abh. Brem. Ver.* iii. p. 66 (1869); *Gieb. Thes. Orn.* i. p. 370 (1872); *Sclat. P. Z. S.* 1880, p. 501; *Brandt, J. f. O.* 1891, p. 267.

Bernicla canagica, *G. R. Gr. Gen. B.* iii. p. 607, n. 7 (1844); *Rchnb. Syn. Av.*, Natatores, t. 101. ff. 414–415 (1845); *Licht. Nomencl. Av.* p. 100 (1854); *Degl. & Gerbe, Orn. Eur.* ii. p. 492 (1867); *Salvad. Ibis*, 1883, p. 348; *Monthz. Bull. Soc. Acclim.* 1886, p. 165.

Chloephaga canagica, *Bp. Compt. Rend.* xliii. p. 648, n. 20 (1856); *Baird, B. N. Am.* p. 768 (1858); *id. Cat. N. Am. B.* n. 573

(1859); *Elliot, Illustr. Am. B.* pl. 45 (1866); *Eyt. Syn. Anat.* p. 25 (1869); *Dall & Bannist. Tr. Chic. Ac.* i. p. 296 (1869); *G. R. Gr. Hand-list*, iii. p. 77, n. 18592 (1871); *Coues, Check-list*, 2nd ed. p. 112, n. 698 (1882); *Dall, Notes Avif. Aleut. Isl. Unal. Eastw.* p. 5 (1873); *Adams, Ibis*, 1878, p. 429 (Michalaski); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 343 (1890).

Philacte canagica, *Bannist. Pr. Acad. Philad.* 1870, p. 131; *Coues, Key*, p. 283, f. 183 (1872); *id. Check-list*, n. 482 (1873); *id. B. N.-West*, p. 558 (1874); *Dall, Notes Avif. Aleut. Isl. West Unal.* p. 6 (1874); *Coues, Elliott's Aff. Alaska*, p. 189 (1875); *Ridgw. Nom. N. Am. B.* n. 598 (1882); *Elliott, Mon. Seal Isl.* p. 130 (1882); *Nelson, Cruise 'Corwin,'* 1881, p. 95 (1883); *B., B., & R. Water-Birds N. Am.* ii. p. 477 with fig. (1884); *Coues, Key N. Am. B.* 2nd ed. p. 689, with fig. p. 688 (1884); *Murdoch, Exp. to Point Barrow*, p. 117 (1885); *Turner, Auk*, 1885, p. 158; *A. O. U. Code of Nomencl. & Check-list*, p. 128, n. 176 (1886); *Ridgw. Man. N. Am. B.* p. 118 (1887); *Turner, Contr. Nat. Hist. Alaska*, p. 142 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 135 (Behring I.) (1887); *Townsend, ibid.* p. 196 (Humboldt Bay, California) (1887); *Nelson, Nat. Hist. Coll. in Alaska*, p. 89, pl. iv. (1887); *Fannin, Auk*, 1895, p. 76 (Vancouver I.).

Chen canagica, *Newt. Enc. Brit.* 9th ed. x. p. 778 (1879); *id. Dict. of B.* p. 374 (pt. 2, 1893).

Adult. Head and nape white, the former frequently stained, especially anteriorly, with rusty or orange rufous; throat and neck, frontally and laterally, brownish black or dusky greyish brown; tail slaty black, and white on terminal half; prevailing colour of rest of plumage bluish ash, each feather variegated by a narrow terminal bar of white and a broader subterminal crescent-shaped one of black, these markings nearly obsolete on abdomen and crissum; greater coverts and secondaries slate-black, conspicuously margined with white; anterior lesser coverts, primaries and primary-coverts plain slaty grey: "lower mandible dark horn-colour, with a white spot on each side of branching rami; membrane about nares livid blue, rest of upper mandible pale purplish, with a fleshy-white wash; edge of nail dark horn-colour, rest of the nail horn-white; iris hazel; legs and feet bright orange-yellow" (*E. W. Nelson*). Total length about 26 inches, wing 14·30–15·75, tail 5, culmen 1·40–1·65, tarsus 2·60–2·85.

Immature birds have the white of the head thickly speckled with black.

Young. Nearly similar to the adult, but the head and neck plumbeous, the former speckled with white, especially on top; the transverse barring of the feathers less distinct than in the adult; bill and feet dusky.

Hab. Coast of Alaska, north of the peninsula, chiefly about the shores of Norton Sound and the valley of the Lower Yukon; it migrates south as far as Humboldt Bay in California; Bering Island and coast of N.E. Asia, west as far as the Tschuktschi Peninsula (*Nordenskiöld*).

a. Ad. st.	Aleutian Is.	Purchased.
b. ♂ ad. sk.	Alaska.	Salvin-Godman Coll.

e–f. ♂ ♀ ad. et ♂ imm. sk.	Yukon Delta, Alaska, May, June (*E. W. Nelson*).	Salvin-Godman Coll.
g, h, i. ♀ ad. et ♂ juv. sk.	St. Michael's, Alaska, June, Sept. (*E. W. N.*).	Salvin-Godman Coll.
k. Imm. sk.	Ugashik, Alaska (*C. L. McKay*).	Salvin-Godman Coll.

18. BRANTA.

	Type.
Branta, *Scop. Ann. I. Hist. Nat.* p. 67 (1769)	B. bernicla.
Bernicla, *Boie, Isis*, 1822, pp. 563, 883; *Steph. Gen. Zool.* xii. 2, p. 45 (1824) (*ex Brisson, Orn.* vi. p. 300, 1760)	B. bernicla.
Leucopareia, *Rchnb. Av. Syst. Nat.* p. ix (1852)	B. leucopsis.
Rufibrenta, *Bp. Compt. Rend.* xliii. p. 648 (subgen.) (1856)	B. ruficollis.
Leucoblepharon, *Baird, Birds of N. Am.* p. 763 (subgen.) (1858) (*nec* Leucoblephara, *Lafr.* 1840)	B. canadensis.
Brenthus, *Sunder. Meth. nat. Av. disp. Tent.* p. 145 (1873) (nom. emend. ex Aristot.) (*nec Schönh.* 1826).	
Ptocas, *Heine, Nom. Mus. Hein. Orn.* p. 342 (1890) (= Rufibrenta).	

Range. Palæarctic and Nearctic regions.

Key to the Species.

a. No chestnut colour on the breast.
  a'. Upper tail-coverts normal, confined to the base of the tail: head partly white.
    a''. Head black, with a somewhat triangular white patch on each cheek, usually confluent on throat; chest brownish like breast and belly.
      a'''. Wing more than 14·50 inches.
        a[1]. Lower parts fading gradually into white on anal region ..... } *canadensis*, p. 112. } *hutchinsi*(?), p. 114.
        b[1]. Lower parts greyish brown, abruptly defined against white of anal region.. [p. 115. *occidentalis* (?),
      b'''. Wing not more than 14·50 inches, usually less ..... *minima*, p. 116.
    b''. Head mostly white; the lores, occiput, neck, and chest black ..... *leucopsis*, p. 117.
  b'. Upper tail-coverts very long, reaching the tip of the tail-feathers; head entirely black.
    c''. Sides of the neck with two patches of white streaks on each side, usually not meeting in front; lower parts greyish, in conspicuous and abrupt contrast with black of chest; or dark brown, but sufficiently defined from the black of the chest.... *bernicla*, p. 119.
    d''. The white patches on the sides of the neck constantly meeting in front, so as to form

a broad white collar, interrupted only behind; breast and abdomen dark sooty brown ..... *nigricans*, p. 123.

b. Chest and a patch on the posterior part of the sides of the head chestnut ..... *ruficollis*, p. 124.

1. Branta canadensis.*

Canada Goose, *Edw. Birds*, pl. 151; *Lath. Syn.* iii. 2, p. 450, n. 14 (1785).

Anser ferus canadensis, *Edw. op. cit.* iii. p. 246 (1750).

Anser canadensis sylvestris, *Briss. Orn.* vi. p. 272, pl. xxvi. (1760).

Anas canadensis, *Linn. S. N.* i. p. 198, n. 14 (1766); *Forst. Phil. Trans.* lxii. p. 414 (1772); *Gm. S. N.* i. p. 514, n. 14 (1788); *Lath. Ind. Orn.* ii. p. 838, n. 17 (1790); *Wils. Am. Orn.* viii. p. 52, pl. 67. f. 4 (1814).

Oie sauvage du Canada, *D'Aubent. Pl. Enl.* 346.

Oie à cravate, *Buff. Hist. Nat. Ois.* ix. p. 82 (1783).

Anser canadensis, *Bonn. Enc. Méth.* i. p. 114, pl. 32. f. 2 (1790); *Vieill. N. D.* xxiii, p. 335 (1818); *Dunn. Dict. Sc. Nat.* xxxv. p. 468 (1826); *Flem. Br. An* p. 128 (1828); *Bp. Syn.* p. 377 (1828); *Sw. & Rich. F. B.-Am.* ii. p. 468 (1831); *Less. Tr d'Orn.* p. 628, n. 16 (1831); *Benn. Gard. & Menag. Zool. Soc. del., Birds*, p. 201 (1831); *Nutt. Man.* ii. p. 349 (1834); *Aud. Orn. Biogr.* iii. p. 1 (1835), v. p. 607, pl. 201 (1839); *Bp. Comp. List*, p. 55 (1838); *Eyt. Mon. Anat.* p. 95 (1838); *Aud. Syn.* p. 270 (1839); *K. & B. Wirbelth. Eur.* pp. lxxxii, 223 (1840); *Aud. B. Am.* vi. p. 178, pl. 376 (1843); *DeKay, N. Y. Zool.* ii. p. 348 (1844); *Gir. B. Long Isl.* p. 289 (1844); *Gosse, B. Jam.* p. 408 (1847); *Baird, Stansbury's Rep.* p. 321 (1852); *Wied, J. f. O.* 1859, p. 164; *Schleg. Mus. P.-B.*, Anseres, p. 105 (1866); *Eyt. Syn. Anat.* p. 44 (1869); *Gieb. Thes. Orn.* i. p. 369 (1872).

Cygnus canadensis, *Steph. Gen. Zool.* xii. 2, p. 19 (1824); *Jen. Man.* p. 227 (1835); *Eyt. Cat. Br. Birds*, p. 65 (1836).

Bernicla canadensis, *Boie, Isis*, 1826, p. 981; *G. R. Gr. Gen. B.* p. 608, n. 12 (1844); *Rchnb. Syn. Av.*, Natatores, t. 105. ff. 247–48 (1845); *Woodh. Sitgr. Rep.* p. 102 (1853); *Licht. Nomencl. Av.* p. 100 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 28 (1856); *Newb. P. R. R. Rep.* vi. p. 100 (1857); *Baird, B. N. Am.* p. 764 (1858); *id. Cat. N. Am. B.* n. 567 (1859); *A. & E. Newt. Ibis*, 1859, p. 368 (St. Croix?); *Heerm. Rep. P. R. R. Rep.* x. pt. vi. p. 66 (1859); *Murr. Edinb. New Philos. Journ.* 1859, p. 225; *Coop. & Suckl. N. H. Wash. Terr.* p. 250 (1860); *Coues, Pr.*

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* Although I keep distinct the synonymy of the four forms admitted by American ornithologists (*B. canadensis, hutchinsi, occidentalis*, and *minima*), and have added to each the description given by Mr. Ridgway, I have not been able to draw the line between them and to recognize more than two species—one (*B. canadensis*) extremely variable in size, and found nearly all over N. America; and a second, very much smaller and not very variable in size, confined to Alaska during the breeding-season, but, according to the American authors, extending to California in winter. Of the first species, besides other specimens, there is in the British Museum a series of 7 specimens from Corpus Christi (Texas), fully adult and young, whose beaks vary from 2·3 to 1·1 inches, and all the other parts accordingly. They show such a perfect transition from one to another, that their specific identity cannot be questioned for a moment.

Ac. Philad. 1861, p. 238; *Ross, Canad. Nat.* 1862, p. 152; *Hayd. Rep.* p. 175 (1862); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Boardm. Pr. Bost. Soc.* iv. p. 139 (1862); *Blakist. Ibis*, 1862, p. 9, 1863, p. 141; *Reinh. Vid. Med.* f. 1864 (1865) p. 246 (Disco); *March, Pr. Ac. Philad.* 1864, p. 70 (Jamaica); *Hoy, Smiths. Rep.* 1864, p. 438 (Missouri); *Dress. Ibis*, 1866, p. 42; *Coues, Pr. Ac. Philad.* 1866, p. 98; *Lawr. Ann. Lyc. N. Y.* viii. p. 296 (1866); *Coues, Pr. Ess. Inst.* vi. p. 298 (1868); *Hincks, P. Z. S.* 1868, p. 211; *Brown, Ibis*, 1868, p. 425 (Vancouver Isl.); *Dall & Bann. Tr. Chic. Ac.* i. p. 295 (Alaska) (1869); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *Coues, Pr. Ac. Philad.* 1871, p. 35 (N. Carolina); *Garrod, P. Z. S.* 1873, p. 467 (two carotids), p. 639 (muscles); *Snow, B. Kansas*, p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 1 (1873); *id. P. Z. S.* 1876, p. 362 (part. ?); *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. P. Z. S.* 1880, p. 502; *Ridgw. Nom. N. Am. B.* n. 594 (1881); *Coues, Check-list*, 2nd ed. p. 112, n. 702 (1882); *Sclat. List Vert. An.* 8th ed. p. 419 (1883); *B. O. U. List Br. B.* p. 118 (1883); *Howley, Auk*, i. pp. 309–313 (Newfoundland) (1884); *B., B., & R. Water-B. N. Am.* i. pp. 455, 456, 457, 460 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 688, n. 702 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 295 (1884–85); *Montl. Bull. Soc. Accl.* 1886, p. 140, fig. p. 141; *Newt. Dict. of B.* p. 376 (pt. 2, 1893).

Cygnopsis canadensis, *Brandt, Descr. et Ic. An. Ross. Nov., Aves*, i. p. 5 (1836); *Bp. Cat. Met. Ucc. Eur.* p. 69, n. 416 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 130 (1844).

? Anser parvipes, *Cass. Pr. Ac. Philad.* 1852, p. 187 (Vera Cruz); *id. U.S. Expl. Exped., Mamm. & Orn.* p. 336 (1858).

Bernicla (Leucoblepharon) canadensis, *Baird, B. N. Am.* p. xlix (1858).

? Bernicla leucolæma, *Murr. Edinb. New Phil. Journ.* ix. p. 226 (var.) (1859).

? Bernicla barnstoni, *Ross, Canad. Nat.* vii. p. 152 (var.) (April 1862); *id. Nat. Hist. Rev.* (2) ii. p. 28 (1862); *Blakist. Ibis*, 1863, p. 143; *B., B., & R. Water-B. N. Am.* i. p. 460 (1884).

Branta canadensis, *Bann. Pr. Ac. Philad.* 1870, p. 131; *Coues, Key*, p. 283, f. 185 *a* (1872); *id. Check-list*, n. 485 (1873); *id. B. N.-West*, p. 554 (1874); *Allen, Bull. Nutt. Orn. Club*, i. p. 50 (1876); *H. W. Elliott, Mon. Seal Isl.* p. 130 (1881); *A. O. U. Code of Nomencl. & Check-list*, p. 126, n. 172 (1886); *Ridgw. Man. N. Am. B.* p. 117, n. 172 (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p 424 (Mackenzie Basin) (1891); *Hartert, Kat. Vogelsamml.* p. 227, n. 3361 (1891); *Hatch, B. of Minnes.* p. 77 (1892); *MacKay, Auk*, 1894, p. 226, 1895, p. 77 (Massachusetts).

Leucoblepharon canadense, *G. R. Gr. Hand-list*, iii. p. 76, n. 10578 (1871); *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Anser (Brenthus) canadensis, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 66 (1882).

Adult. Head and nearly all the neck black; chin and throat white, extending upwards on the cheeks and ending in a point behind the ear-coverts; back, wing-coverts, secondaries, and tertials brown, the feathers, except those of the back, with lighter-coloured edges; rump black; upper tail-coverts white; lower part of the neck almost white, but rarely distinct; breast and belly pale

brown, gradually fading into the white of the vent and under tail-coverts; primaries and tail-feathers black: bill black; irides dark brown; legs, toes, and membranes dark lead-colour, almost black. Total length 41–42 inches, wing 15·60–21, culmen 1·55–2·70, tarsus 2·45–3·70. (*Ridgway.*)

Female. Similar to the male, but smaller.

Young are much smaller, and have the white feathers of the cheeks edged with black.

Hab. Temperate North America, breeding in the Northern United States and British territory, migrating in winter southwards to Mexico.

2. Branta hutchinsi.

Anser canadensis, *Pall.* (*nec Linn.*) *Zoogr. Rosso-As.* ii. p. 230 (Aleutian Islands) (1811).

Anas bernicla, var. β, *Rich. App. Parry's 2nd Voy.* p. 368 (1825).

Anser hutchinsii, *Rich. in Sw. & Rich. Faun. Bor.-Am.* ii. p. 470 (1831); *Nutt. Man.* ii. p. 362 (1834); *Aud. Orn. Biogr.* iii. p. 226, pl. 277 (1835); *Bp. Comp. List,* p. 55 (1838); *Eyt. Mon. Anat.* p. 95 (1838); *Aud. Syn.* p. 271 (1839); *id. B. Am.* vi. p. 198, pl. 377 (1843); *Linsl. Am. Journ.* xliv. p. 249 (Connecticut) (1843); *Giraud, B. Long I.* p. 292 (1844); *Peale, U.S. Expl. Exped.* viii. sp. 158 (1848); *Rchnb. Av. Syst. Nat.*, Natatores, *Novitiæ*, t. 104. f. 2772 (*ex Audubon?*) (1850); *Hartl. Wiegm. Arch.* 1852, i. p. 122; *Bp. Compt. Rend.* xxxviii. p. 664 (California) (1853); *id. Not. Coll. Delattre*, p. 93 (1854); *Putn. Pr. Ess. Inst.* i. p. 219 (Massachusetts) (1856); *Schleg. Mus. P.-B.*, Anseres, p. 105 (=leucopareius, *Brandt*) (Mexico) (1866); *Eyt. Syn. Anat.* p. 43 (1869); *Gieb. Thes. Orn.* i. p. 371 (1872); *Seebh. B. Jap. Emp.* p. 239 (1890).

Anser leucopareius, *Brandt, Bull. Sc. Ac. Pétersb.* i. p. 37 (Aleutians) (1836).

Anser (Bernicla) leucopareius, *Brandt, Descr. et Icon. Anim. Ross. Nov., Aves*, i. p. 13, pl. 2 (1836); *id. J. f. O.* 1891, p. 267.

Bernicla leucopareia, *G. R. Gr. Gen. B.* iii. p. 608, n. 13 (1844); *Rchnb. Syn. Av.*, Natatores, t. 101. ff. 416, 954 (1845); *Bp. Compt. Rend.* xliii. p. 648, n. 29 (1856).

Bernicla hutchinsii, *G. R. Gr. Gen. B.* iii. p. 608, n. 14 (1844); *Woodh. Sitgr. Rep.* p. 102 (California) (1853); *Licht. Nomencl. Av.* p. 100 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 30 (1856); *Newb. P. R. R. Rep.* vi. p. 101 (California) (1857); *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 336 (1858); *Baird, B. N. Am.* pp. 763, 766 (1858); *id. Cat. N. Am. B.* n. 569 (1859); *Heerm. P. R. R. Rep.* x. pt. vi. p. 67 (1859); *Murr. Edinb. New Phil. Journ.* ix. p. 228, pl. 4. f. 2 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 251 (1860); *Ross, Canad. Natur.* 1862, p. 152; *Blakist. Ibis*, 1863, p. 143; *Allen, Pr. Ess. Inst.* iv. p. 87 (Massachusetts) (1864); *Coues, Pr. Ac. Philad.* 1866, p. 98 (Colorado); *Lawr. Ann. Lyc. N. Y.* viii. p. 296 (1866); *Hincks, P. Z. S.* 1868, p. 211; *Coues, Pr. Ess. Inst.* v. p. 298 (1868); *Turnb. B. E. Pa.* p. 45 (1869); *Dall & Bann. Tr. Chic. Ac.* i. p. 295 (Alaska) (1869); *Finsch, Abh. Ver. Brem.* iii. p. 20 (1872); *Snow, B. Kans.* p. 11 (1873); *Sclat. P. Z. S.* 1880, p. 502; *Seebh. Ibis*, 1882, p. 369 (Japan); *Sclat. List Vert. An.* 8th ed. p. 419 (1883); *Blak. & Pryer, Tr. As. Soc. Jap.* x. p. 96 (1882); *Blakist. Amend. List B.*

Jap. pp. 9, 33 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 298 (1884–85); *Montluz. Bull. Soc. Accl.* 1886, p. 143; *Newt. Dict. of B.* p. 376 (pt. 2, 1893).

Bernicla (Leucoblepharon) hutchinsii, *Baird, B. N. Am.* p. xlix (1858).

Branta hutchinsii, *Bann. Pr. Ac. Philad.* 1870, p. 131.

Leucoblepharon hutchinsii, *G. R. Gr. Hand-list*, iii. p. 76, n. 10579 (1871).

Leucoblepharon leucopareia, *G. R. Gr. Hand-list*, iii. p. 76, n. 10580 (1871).

Branta canadensis, var. hutchinsii, *Coues, Key N. Am. B.* p. 284, n. 4856 (1872); *Turner, Auk*, 1885, p. 158.

Anser (Branta) canadensis, var. hutchinsii, *Ridgw. Ann. Lyc. N.Y.* x. p. 388 (Illinois) (1874).

Branta canadensis, *e.* hutchinsii, *Coues, B. N.-West*, p. 554 (1874).

Bernicla leucoparia, *Blak. & Pryer, Ibis*, 1878, p. 212 (Japan); *iid. Tr. As. Soc. Jap.* viii. p. 183 (1880).

Bernicla canadensis hutchinsii, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 203 (1880); *id. Nom. N. Am. B.* n. 594 *a* (1882); *Coues, Check-list*, 2nd ed. p. 172, n. 704 (1882).

Anser (Brenthus) hutchinsi, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).

Branta leucopareia, *Stejn. Pr. U.S. Nat. Mus.* vi. p. 70 (1883).

Bernicla canadensis, γ. hutchinsii, *B., B., & R. Water-B. N. Am.* i. pp. 455, 457, 458, 464 (1884).

Branta canadensis hutchinsii, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 147 (1885); *A. O. U. Code of Nomencl. & Check-list N. Am. B.* p. 127, n. 172 *a* (1886); *Turner, Contr. N. H. Alaska*, p. 139 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 84 (1887); *Ridgw. Man. N. Am. B.* p. 117, n. 172 *a* (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 135 (Bering I.) (1887); *Shufeldt, Pr. U.S. Nat. Mus.* xi. pp. 248–251, ff. 27, 28, 29, 30 (osteology) (1888); ? *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 424 (1891); *Hatch, B. of Minnes.* p. 80 (1892).

"Similar to *B. canadensis*, but smaller (wing usually less than 16·00 inches; culmen usually less than 1·75). Length about 25·00–34·00, wing 14·75–17·75, culmen 1·20–1·90, tarsus 2·25–3·20" (*Ridgway*).

Hab. "Arctic and Subarctic America; south in winter, through United States, chiefly west of the Alleghanies; North-eastern Asia (Japan to Eastern Siberia)" (*Ridgway*).

3. Branta occidentalis.

? Bernicla canadensis, *Cass.* (*nec Linn.*) *U.S. Expl. Exped., Mamm. & Orn.* p. 335 (1858); *Hartl. J. f. O.* 1883, p. 282 (Alaska).

Bernicla leucopareia, *Baird* (*nec Brandt*), *B. N. Am.* pp. xlix, 765 (1858); ? *Newt. Dict. of B.* p. 376 (pt. 2, 1893).

Bernicla occidentalis, *Baird, op. cit.* p. 766 (1858); *id. Cat. N. Am. B.* n. 567 *a* (1859); *Saund. Yarrell's Hist. Br. B.* iv. p. 298 (1884–85); *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 22 (1885).

Bernicla canadensis, var. occidentalis, *Dall & Bann. Tr. Chic. Ac.* i. p. 295 (1869); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 363 (Durango) (1874).

Bernicla canadensis, var. leucopareia, *Coues, Key*, p. 284 (1872).

Branta canadensis, *b.* leucopareia, part., *Coues, B. N.-West*, p. 554 (1874).
Bernicla canadensis, part., *Sclat. & Salv. P. Z. S.* 1876, p. 362 (Durango, Mexico).
Bernicla canadensis occidentalis, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 203 (1880); *id. Nom. N. Am. B.* n. 594 *c* (1881); *Coues, Key N. Am. B.* 2nd ed. p. 688, n. 702 *a* (1884).
Bernicla canadensis, β. occidentalis, *B., B., & R. Water-B. N. Am.* i. p. 455 (1884).
Branta canadensis occidentalis, *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Code of Nomencl. & Check-list N. Am. B.* p. 127, n. 172 *b* (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 85 (1887); *Ridgw. Man. N. Am. B.* p. 117, n. 172 *b* (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 424 (1891).

Adult. "Lower parts deep greyish brown or brownish grey (often not conspicuously paler than upper parts), abruptly defined against white of anal region; white cheek-patches usually separated by a black throat-stripe, or black mottling on throat; white collar round lower neck usually very distinct in winter plumage; tail-feathers usually 18·00–20·00. Total length about 35 inches, wing 16·25–18·00, culmen 1·40–1·65, tarsus 3·05–3·25." (*Ridgway.*)

Hab. "North-west coast of America; north to Sitka; south in winter to California" (*Ridgway*).

(*Branta canadensis*; *B. hutchinsi*; *B. occidentalis.*)

a, b. Ad. st.	N. America.	Purchased.
c, d. Ad. sk.	Brit. Columbia (*J. K. Lord*).	N. America Boundary Comm. [P.].
e. Ad. sk.	Fraser River, Brit. Columbia (*J. K. L.*).	N. America Boundary Comm. [P.].
f. Ad. sk.	49th Parallel (*J. K. L.*).	N. America Boundary Comm. [P.].
g, h, i. ♀ ad. et ♀ imm. sk.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].
k. ♀ ad. sk.	Fort Simpson, May (*B. R. Ross*).	A. Murray, Esq. [P.].
l. Head.	Arctic America (*R. MacFarlane*).	Salvin-Godman Coll.
m. Ad. st.	North Land Exped.	Sir G. Back [P.].
n. Ad. sk.	Hudson Bay.	Capt. D. Herd [P.].
o. Ad. st.	Repulse Bay, Hudson Bay.	Dr. Rae [P.].
p–v. ♂ ♀ ad et ♂ juv. sk.	Corpus Christi, Texas, Nov. (*F. B. Armstrong*).	Salvin-Godman Coll.
w. Ad. sk.	Yokohama (*H. Pryer*).	Seebohm Coll.
x. Ad. sk.	Hakodadi (*Blakiston*).	Seebohm Coll.
y. Pull. sk.	British Isles.	H. J. Elwes, Esq. [P.].
z. Ad. sk.	Dorsetshire.	Mrs. E. Goolden [P.].
a', b'. Ad. st.	Cumberland.	Purchased.
c'. Pull. st.		Purchased.
d'. Skeleton.		

4. Branta minima.

Bernicla leucopareia, *Cass.* (*nec Brandt*) *Ill. B. Cal., Tex. &c.* p. 272, pl. 45 (1853); *Baird, Cat. N. Am. B.* n. 568 (1859); ? *Dall & Bann. Tr. Chic. Acad.* i. p. 295 (Alaska) (1869); *Saund. Yarrell's Hist. Br. B.* iv. p. 298 (1884–85).

Branta canadensis, var. leucopareia, *Coues in Elliot's Affairs in Alaska*, p. 190 (1875) (*nec Key*, 1872, p. 284, which = B. occidentalis, *Baird*); *Coues, Check-list*, n. 485 *a* (1873).
Bernicla canadensis leucopareia, *Ridgw. Nom. N. Am. B.* n. 594 *b* (1881); *Coues, Check-list*, 2nd ed. p. 112, n. 703 (part.) (1882); *id. Key N. Am. B.* 2nd ed. p. 689 (1884).
Bernicla canadensis, δ. leucopareia, *B., B., & R. Water-B. N. Am.* i. pp. 456, 457, 459 (1884).
Branta minima, *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 22 (1885).
Branta canadensis minima, *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Code of Nomencl. & Check-list N. Am. B.* p. 127, n. 172 *c* (1886); *Townsend, Auk*, 1887, p. 12 (breeding; Kowak R., N. Alaska); *Turner, Contr. N. H. of Alaska*, p. 139 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 86 (1887); *Ridgw. Man. N. Am. B.* p. 117 (1887).
Bernicla muurii, *Rothsch. Ann. & Mag. N. H.* (6) x. p. 108 (1892) (Kauai, Sandwich Islands) (*type examined* = minima).

Similar to *B. canadensis*, but very much smaller. Lower parts deep greyish brown or brownish grey (often not conspicuously paler than the upper parts), abruptly defined against white of anal region; the feathers of the underparts have paler edges; white cheek-patches usually separated by a black stripe of spotting on the throat, and lower part of neck encircled by a more or less distinct white collar; tail-feathers usually 14–16. Total length about 23–25 inches, wing 13·60–14·50, culmen 0·95–1·15, tarsus 2·40–2·75.

Hab. Pacific coast of North America, breeding chiefly about the shores of Norton Sound and the Lower Yukon, but extending to Kotzebue Sound and along the Arctic coast to the vicinity of Point Barrow; south in winter to California, and more rarely to Upper Mississippi Valley (Wisconsin, &c.); it strays to the Sandwich Islands.

a, b, c. ♂ ♀ ad. et pull. sk.	St. Michael's, Alaska, June, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Kottik, mouth of Yukon R., Alaska, May (*E. W. Nelson*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Gray's Harbour, Washington Territory, Dec. (*Henshaw*).	Salvin-Godman Coll.

5. Branta leucopsis.

The Barnacle or Bernacle Goose.
Bernicla, *Briss. Orn.* vi. p. 300 (1760).
Bernicla minor, *Briss. op. cit.* p. 302 (1760) (juv.).
Anas bernicla, part., *Linn. S. N.* i. p. 198, n. 13 (1766).
? Anas hrota, *O. F. Müll. Zool. Dan. Prodr.* p. 14 (1776).
Bernache, *D'Aubent. Pl. Enl.* 855; *Buff. Hist. Nat. Ois.* ix. p. 93 (1783).
Anas erythropus, *Gm.* (*nec Linn.*) *S. N.* i. 2, p. 512, n. 11 (1788); *Lath. Ind. Orn.* ii. p. 843, n. 31 (1790).
Anas erythropus, β, *Lath. Ind. Orn.* ii. p. 844 (1790).
Anser erythropus, *Bonn.* (*nec Linn.*) *Enc. Méth.* i. p. 120, n. 28 (1790); *Less. Man. d'Orn.* ii. p. 408 (1828); *Degl. Orn. Eur.* ii. p. 402 (1849).
Anas leucopsis, *Bechst. Orn. Taschenb.* ii. p. 424 (1803); *Temm. Man.* p. 531 (1815); *id. op. cit.* 2nd ed. ii. p. 823 (1820).

Anser leucopsis, *Bechst. Gem. Naturg. Deutschl.* 2nd ed. iv. p. 921 (1809); *Vieill. N. D.* xxiii. p. 329 (1818); *Dumont, Dict. Sc. Nat.* xxxv. p. 462 (1825); *Bp. Syn.* p. 377 (1828); *Less. Tr. d'Orn.* p. 627 (1831); *Nutt. Man. Orn.* ii. p. 355 (1834); *Jen. Man.* p. 224 (1835); *Aud. Orn. Biogr.* iii. p. 609, pl. 296 (1835); *id. Syn.* p. 271 (1839); *Bp. Comp. List*, p. 55 (1838); *Eyt. Mon. Anat.* p. 86 (1838); *Keys. & Blas. Wirbelth. Eur.* pp. lxxxiii, 224 (1840); *Naum. Vög. Deutschl.* xi. p. 378, Taf. 291 (1842); *Aud. B. Am.* vi. p. 200, pl. 378 (1843); *Schleg. Rev. Crit.* p. 11 (1844); *Middend. Reis. Sibir.* ii. 2, p. 228 (Siberia?) (1851); *Wallengr. Naumannia*, 1854, p. 268 (Scandinavia); *Thorell, Bidr. Spitzb. Molluskf.* p. 60 (1859); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 296 (1863); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1863, p. 106; *Swinh. P. Z. S.* 1863, p. 323 (*ex Midd.*); *Schleg. Mus. P.-B.*, Anseres, p. 104 (1866); *Lawr. Am. Nat.* v. p. 10 (1871); *Gieb. Thes. Orn.* i. p. 372 (1872); *Nordensk. Voy. Vega*, i. p. 126 (1881) (Spitsbergen & Novaia Zemlia); *Seebh. Hist. Br. B.* iii. p. 512, pl. 60 (egg) (1885).

Anser bernicla, *Pall.* (*nec Linn.*) *Zoogr. Rosso-As.* ii. p. 230 (1811); *Leach, Cat.* p. 37 (1816); *Flem. Brit. An.* p. 127 (1828).

Bernicla leucopsis, *Boie, Isis*, 1822, p. 563; *Kaup, Skiz. Ent. eur. Thierw.* p. 25 (1829); *Brehm, Handb. Vög. Deutschl.* p. 847 (1831); *Eyt. Cat. Br. B.* p. 62 (1836); *Macgilliv. Man.* ii. p. 150 (1842); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 424 (1842); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 128 (1844); *id. Gen. B.* iii. p. 607, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 97. ff. 230-231 (1845); *Bp. Compt. Rend.* xliii. p. 648, n. 31 (1856); *Baird, B. N. Am.* p. 768 (1858); *id. Cat. N. Am. B.* n. 572 (1859); *id. Am. Nat.* ii. p. 49 (Hudson Bay); *Reinh. Ibis*, 1861, p. 12 (Greenland); *G. R. Gr. List Br. B.* p. 184 (1863); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1864, p. 395; *Newt. Ibis*, 1865, p. 513; *Degl. & Gerbe, Orn. Eur.* ii. p. 488 (1867); *Eyt. Syn. Anat.* p. 33 (1869); *Malmgr. Ibis*, 1869, p. 230 (Spitsbergen); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Malmgr. J. f. O.* 1870, p. 303; *Fritsch, Vög. Eur.* p. 401, Taf. 145. f. 1 (1870); *Heugl. J. f. O.* 1871, p. 104 (Rotjess-Fjell and Barents-Land?); *Lawr. Am. Nat.* v. p. 283 (North Carolina) (1871); *Eaton, Zoologist*, 1874, p. 3815 (Spitsbergen); *Dress. B. Eur.* vi. p. 397, pl. 415. f. 1 (1878); *Sclat. P. Z. S.* 1880, p. 501; *Freke, Zoologist*, Sept. 1881, p. 372; *Ridgw. Nom. N. Am. B.* n. 597 (1882); *Coues, Check-list*, 2nd ed. p. 112, n. 699 (1882); *Salv. Cat. B. Strickl. Coll.* p. 529, n. 2574 (1882); *Sclat. List Vert. An.* 8th ed. p. 419, n. 954 (1883); *B. O. U. List Br. B.* p. 118 (1883); *Saund. Yarrell's Hist. Br. B.* iv. p. 286 (1884–85); *Costa, Rend. Ac. Nap.* xxv. p. 106 (Italy) (1886); *Monthuz. Bull. Soc. Accl.* 1886, p. 143, fig. p. 144; *Lilford, Col. Fig. Br. Birds*, pt. xi. pl. — (1889); *Saunders, Man. Brit. Birds*, p. 397 (1889); *Payton, Ibis*, 1891, p. 297 (Marocco); *Arrig. degli Oddi, Atti Soc. Ital.* xxxiv. pp. 117–121 (Venetian) (1892); *Newt. Dict. of B.* p. 375 (pt. 2, 1893).

Bernicla erythropus, *Steph. Gen. Zool.* xii. 2, p. 49 (1824); *Brehm, Handb. Naturg. Vög. Deutschl.* p. 848 (1831); *Licht. Nomencl. Av.* p. 100 (1854).

Leucopareia leucopsis, *Rchnb. Av. Syst. Nat.* p. ix (1852); *G. R. Gr. Hand-list*, iii. p. 76, n. 10581 (1871); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Chenalopex leucopsis, "*Less.*," *Gieb. Thes. Orn.* i. p. 372 (*in syn.* A. leucopsis) (1872).

Branta leucopsis, *Bann. Pr. Ac. Philad.* 1871, p. 131; *Coues, Key*, p. 283 (1872); *id. Check-list*, n. 483 (1873); *id. B. N.-West*, p. 558 (1874); *B., B., & R. Water-B. N. Am.* i. p. 474 (1884); *Salvad. El. Ucc. Ital.* p. 253, n. 351 (Italy) (1886); *Ridgw. Man. N. Am. B.* p. 117, n. 175 (1887); *Rchnw. J. f. O.* 1890, p. 81; *Dub. Faun. Vert. Belg., Ois.* ii. p. 385, pl. 242 (1891); *Hartert, Kat. Vogelsamml.* p. 227, n. 3367 (1891).

Anser (Brenthus) leucopsis, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 66 (1882).

Adult male. Forehead, cheeks, and chin white; a streak from the beak to the eye, top of the head, nape, all the neck, and interscapulars black; rump bluish black; upper tail-coverts white; breast and belly greyish white; vent and under tail-coverts pure white; flanks and thighs tinged with grey in bars; scapulars, wing-coverts, and tertials lavender-grey, tipped with a crescent of bluish black, and an extreme edge of white; primaries and tail-feathers almost black: bill, legs, toes, membranes, and claws black; irides dark brown. Total length 25·5–28 inches, wing 16, tail 5·5, culmen 1·37, tarsus 2·3.

Female. A little smaller than the male.

Young. The white of the cheeks varied with black feathers; the ends of the feathers on the back and of the wing-coverts tinged with rufous; the flanks barred with darker grey, and the legs less black than in the adults.

I have seen on the waters of Battersea Park, in London, a living hybrid between this species and some kind of Goose (?); it has the white on the head much more extended, the legs yellow, and the general colouring paler brown than in *B. leucopsis*.

Hab. Greenland, Iceland, Spitsbergen, and Novaia Zemlia, where probably it breeds; passes on migration along the shores of Scandinavia to winter in the Baltic, and on the coasts of Denmark, Holland, England, and Northern France; seldom straggling to Central and Southern Europe; casually on the Atlantic coast of North America.

a. Ad. st.	Great Britain.	Purchased.
b, c. ♂ ♀ ad. st.	Cumberland.	Purchased.
d. Ad. st.	Devonshire.	Col. Montagu Coll.
e. Pull. st.		Purchased.
f–h. ♂ ♀ ad. sk.	Holland.	H. J. Pike, Esq. [P.].
i. ♀ ad. skeleton.	Holland.	H. J. Pike, Esq. [P.].
k, l. Skeletons.		
m. Sternum.	England.	J. Ray, Esq. [P.].

6. Branta bernicla.

Brent-Goose.

Anser torquatus, *Frisch, Vög. Deutschl.* ii. Taf. 156.

Brenta, *Briss. Orn.* vi. p. 304, pl. xxxi. (1760).

Anas bernicla, *Linn. S. N.* i. p. 198, n. 13 (part.)(1766); *Gm. S. N.* i. 2, p. 513, n. 13 (1788); *Lath. Ind. Orn.* ii. p. 844, n. 32 (1790); *Bechst. Orn. Taschenb.* ii. p. 424, n. 11 (1803); *Wils. Am. Orn.* viii. pl. 72. f. 1 (1814); *Temm. Man. d'Orn.* p. 531 (1815); *id. op. cit.* 2nd ed. ii. p. 824 (1820); *Scoresby, Acc. Arct. Reg.* i. p. 527 (1820); *Ranz. El. di Zool.* iii. 9, p. 91 (1826); *Werner,*

Atlas, Palmipèdes, pl. 33 (1828); *Ross, in Parry's Narr.*, App. p. 196 (1828); *Less. Man. d'Orn.* ii. p. 408 (1828); *id. Tr. d'Orn.* p. 627, n. 3 (1831).

Branta bernicla, *Scop. Ann. I. H. N.* p. 67, n. 84 (1769); *Bann. Pr. Ac. Philad.* 1870, p. 131; *G. R. Gr. Hand-list*, iii. p. 76, n. 10575 (1871); *Coues, Key*, p. 284 (1872); *id. Check-list*, n. 484 (1873); *id. B. N.-West*, p. 556 (1874); *A. O. U. Code of Nomencl. & Check-list N. Am. B.* p. 127, n. 173 (1886); *Salvad. El. Ucc. Ital.* p. 253, n. 352 (1886); *Rchnw. J. f. O.* 1890, p. 81; *Hartert, Kat. Vogelsamml.* p. 227 (1891); *Hatch, B. of Minnes.* p. 81 (1892); *MacKay, Auk*, 1894, p. 224 (Muskeget I.).

Anas brenta, *Tunst. Orn. Brit.* p. 4 (1771).

Oca colombaccio, *Gerini, Stor. degli Ucc.* v. Taf. 582 (1776).

Cravant, *D'Aubent. Pl. Enl.* 342; *Buff. Hist. Nat. Ois.* ix. p. 87 (1783).

Brent Goose, *Lath. Syn.* iii. 2, p. 467, n. 27 (1785).

Anser bernicla, *Bonn. Enc. Méth.* i. p. 121, pl. 32. f. 4 (1790); *Illig. Prodr.* p. 277 (1811); *Bp. Ann. Lyc. N. Y.* p. 378 (1826); *id. Syn.* p. 378 (1828); *Sw. & Rich. Faun. B.-A.* ii. p. 469 (1831); *Savi, Orn. Tosc.* iii. p. 180 (1831); *Nutt. Man.* ii. p. 359 (1834); *Sw. Class. B.* ii. p. 365 (1837); *Aud. Orn. Biogr.* v. p. 610, pl. 391 (1839); *id. Syn.* p. 272 (1839); *Selys-L. Faun. Belg.* i. p. 139 (1842); *Aud. B. Am.* vi. p. 203, pl. 379 (1843); *Schleg. Rev. Crit.* p. cx (1844); *Giraud, B. Long I.* p. 293 (1844); *DeKay, N. Y. Zool.* p. 351 (1844); *Degl. Orn. Eur.* ii. p. 404 (1849); ? *Midd. Reis. O.-Sibir.* p. 228, Taf. xxi. f. 1 (pullus) (1851) (Taimyr River, Boganida, breeding); *Wallengr. Naumannia*, 1854, p. 269 (Scandinavia); *Müll. J. f. O.* 1856, p. 231 (Provence); *Putn. Pr. Ess. Inst.* i. p. 219 (1856); *Schleg. Vog. Nederl.* pl. 286 (1858); *Thorell, Bidr. Spitzb. Molluskf.* p. 60 (1859); *Malmgr. Öfv. K. Vet.-Ak. Förh.* 1863, p. 106; *id. J. f. O.* 1863, p. 377 (Spitsbergen); *Schleg. Mus. P.-B.*, Anseres, p. 105 (part.) (1866); *Droste, Vogelw. Nordseeins. Borkum*, p. 287 (1869); *Gieb. Thes. Orn.* i. p. 369 (part.) (1872).

Anas monachus, *Beseke (nec Scop.)*, *Vög. Kurl.* p. 45, Taf. 5 (1792).

Anser torquatus, *Bechst. (nec Gm.) Gemeinn. Naturg. Deutschl.* 2nd ed. iii. p. 911 (1809) (*ex Frisch*); *Nilss. Orn. Suec.* ii. p. 245 (1817); *Vieill. N. D.* xxiii. p. 333 (1818); *Brehm, Lehrb. Eur. Vög.* p. 777 (1823); *Dum. Dict. Sc. Nat.* xxxv. p. 463 (1825); *Naum. Vög. Deutschl.* xi. p. 393, Taf. 292 (1842); *Kjærb. Danm. Fugle*, p. 360, Taf. 45 (1852); *Holb. Faun. Grönl.* p. 63 (1854); *Tobias, J. f. O.* 1853, p. 217; *Schrader, ibid.* pp. 243, 317 (Lapland); *Fritsch, ibid.* p. 370; *Schilling, ibid.* p. 376; *Reinh. J. f. O.* 1854, p. 441 (Greenland); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 296 (1860); *Sund. J. f. O.* 1863, p. 457; *Nordm. J. f. O.* 1864, p. 377 (Finnland); *Quinstorp, J. f. O.* 1868, p. 262.

Anser brenta, part. (?), *Pall. Zoogr. Rosso-As.* ii. p. 229 (1811) (*ex Briss.*); *Leach, Cat.* p. 37 (1816); *Flem. Brit. An.* p. 127 (1828); *Gould, B. Eur.* v. pl. 352 (1837); *Keys. & Blas. Wirbelth. Eur.* pp. lxxxiii, 224 (1840); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *id. Faun. & Flora of Palest.* p. 114 (1884); *Seebh. Hist. Br. B.* iii. p. 508, pl. 60 (egg) (1885).

Bernicla torquata, *Boie, Isis*, 1822, p. 563; *C. L. Brehm, Isis*, 1830, p. 996; *id. Naturg. Vög. Deutschl.* p. 851 (1831); *Licht. Nomencl.* p. 100 (1854); *Brehm, Naumannia*, 1855, p. 297; *id. Thierl.* iv. p. 802 (1867); *Newt. Dict. of B.* p. 375 (pt. 2, 1893).

Bernicla brenta, *Steph. Gen. Zool.* xii. 2, p. 46 (1824); *Eyt. Mon. Anat.* p. 85 (1838); *Bp. Comp. List*, p. 56 (part.) (1838); *G. R.*

Gr. List Gen. B. p. 73 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 425 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 128, specim. *a*, *b* (1844); *id. Gen. B.* iii. p. 607, n. 1 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Rchnb. Syn. Av.*, Natatores, t. 97. ff. 228–29 (1845); *id. Av. Syst. Nat.* p. ix (1852); *Woodh. Sitgr. Rep.* p. 102 (1853); *Bp. Compt. Rend.* xliii. p. 648, n. 33 (1856); *Baird, B. N. Am.* p. 767 (1858); *id. Cat. N. Am. B.* n. 570 (1859); *Evans & Sturge, Ibis*, 1859, p. 167 (W. Spitsbergen); *Homeyer, J. f. O.* 1859, p. 370; *Barnst. Ibis*, 1860, p. 255 (Hudson's Bay); *Walker, ibid.* pp. 166, 167 (Greenland); *Sclat. ibid.* p. 308 (egg); *Reinh. Ibis*, 1861, p. 12 (Greenland); *Ross, Canad. Nat.* vii. p. 152 (1862); *id, Nat. Hist. Rev.* (2) ii. p. 287 (1862); *Verrill, Pr. Ess. Inst.* 1862, p. 153; *Blakist. Ibis*, 1863, p. 145; *Altum, J. f. O.* 1863, p. 120; *Droste, J. f. O.* 1864, p. 428 (Borkum); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1864, p. 394; *Newt. Ibis*, 1865, p. 512 (Spitsbergen); *Malmgr. J. f. O.* 1865, p. 209 (Spitsbergen); *Droste, ibid.* p. 342; *Dress. Ibis*, 1866, p. 42 (Texas); *Lawr. Ann. Lyc. N. Y.* viii. p. 296 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 489 (1867); *Droste, J. f. O.* 1867, pp. 65, 89; *Tristr. Ibis*, 1868, p. 328 (Palestine); *Coues, Pr. Ess. Inst.* vi. p. 298 (1868); *Gillett, Ibis*, 1870, p. 308 (Novaya Zemlya); *Fritsch, Naturg. Vög. Eur.* p. 402, Taf. 45. f. 2 (1870); *Malmgr. J. f. O.* 1870, pp. 287, 304; *Coues, Pr. Ac. Philad.* 1871, p. 36 (North Carolina); *Heugl. J. f. O.* 1871, p. 104 (Spitsbergen); *id. Ibis*, 1872, p. 63 (Novaja Zemlia); *Shell. B. of Egypt*, p. 281 (1872); *Heugl. J. f. O.* 1872, p. 120 (Novaja Zemlia); *Garrod, P. Z. S.* 1873, p. 638, f. 5 (muscles); *Gould, B. Gr. Brit.* v. pl. 7 (1873); *Heugl. Orn. N.O.-Afr.* ii. p. 1290 (1873); *Bessels, Bull. Soc. Geogr.* March 1875; *Dress. B. Eur.* vi. p. 389, pl. 415. f. 2 (pts. 63, 64, 1877); *Feild. P. Z. S.* 1877, p. 32 (breeding, Polar Basin); *id. Ibis*, 1877, p. 412; *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. P. Z. S.* 1880, p. 502; *Ridgw. Nom. N. Am. B.* n. 595 (1881); *Neale, P. Z. S.* 1882, p. 652 (Franz-Josef Land); *Coues, Check-list*, 2nd ed. p. 112, n. 700 (1882); *Salv. Cat. B. Strickl. Coll.* p. 529, n. 2575 (1882); *B. O. U. List Br. B.* p. 117 (1883); *Sclat. List Vert. An.* 8th ed. p. 419 (1883); *Coues, Key N. Am. B.* 2nd ed. p. 687, fig. p. 686, n. 700 (1884); *B., B., & R. Water-B. N. Am.* i. p. 467 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 290 (1884–85); *Bedd. P. Z. S.* 1885, p. 843 (anatomy); *Montluz. Bull. Soc. Accl.* 1886, p. 134 (fig. p. 135); *Tristr. Cat. Coll. B.* p. 54 (1889); *Saunders, Man. Brit. Birds*, p. 339 (1889); *Russell, Zool.* (2) xiv. pp. 62–69 (Essex) (1890); *Payton, Ibis*, 1891, p. 296 (Marocco).

Bernicla glaucogaster, *C. L. Brehm, Isis*, 1830, p. 996 (descr. nulla); *id. Handb. Vög. Deutschl.* p. 849 (1831); *id. Naumannia*, 1855, p. 297.

Bernicla micropus, *C. L. Brehm, Isis*, 1830, p. 996; *id. Vög. Deutschl.* p. 849 (1831); *id. Naumannia*, 1855, p. 297 (= var. glaucogaster).

Bernicla platyuros, *C. L. Brehm, Isis*, 1830, p. 996; *id. Vög. Deutschl.* p. 850 (1831); *id. Naumannia*, 1855, p. 297.

Bernicla collaris, *C. L. Brehm, Isis*, 1830, p. 996; *id. Vög. Deutschl.* p. 851 (1831); *id. Naumannia*, 1855, p. 297 (= var. glaucogaster).

Bernicla melanopsis, *Macgill. Man. Br. Orn.* ii. p. 151 (1842).

Bernicla pallida, *C. L. Brehm, Vogelfang*, p. 368 (1855); *id. Naumannia*, 1855, p. 297.

Bernicla brenta, *a.* glaucogaster, *Bp. Compt. Rend.* xliii. p. 648, n. 33 *a* (1856).

Brenthus bernicla, *Saund. Meth. nat. Av. disp. Tent.* p. 145 (1872) *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Brenta bernicla, *Heugl. Reis. Nordpolarmeer*, iii. p. 132 (1874).
Anser (Brenthus) torquatus, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).
Anser brenta glaucogaster, *Seebh. Hist. Br. Birds*, iii. p. 508 (1885).
Branta brenta, *Dubois, Faun. Belg., Ois.* ii. p. 388, pl. 243 (Livr. 143–152, 1892).

Adult male. Head, neck, and breast sooty-black, sharply defined from the brown-grey colour of the upper and under parts; two white patches, with some admixture of black, on the sides of the neck; rump brown-black; upper tail-coverts, vent, and under tail-coverts white; the feathers of the upper and under parts with somewhat lighter edgings, quite distinct and whitish on the flanks; quills and tail-feathers brownish black; under wing-coverts brown-grey: bill black; irides dark brown; tarsus, toes, and webs black, with an olive-green tinge upon the tarsal joint and the upper surface of the toes. Total length about 21 inches, wing 13, tail 3·5, culmen 1·5, tarsus 2·1.

Female. Similar to the male, but a little smaller.

Young. Paler than the adults; no white patches on the sides of the neck; the dark colour of the upper breast scarcely darker than the underparts; no white edgings to the feathers of the flanks; wing-coverts with conspicuous pale edges, almost white on the median and greater ones; secondaries with white tips.

In this species there seem to be two forms—a dark-bellied one (*B. bernicla*), which, according to Mr. Seebohm, breeds in the Taimyr peninsula, Novaia Zemlia, Franz-Josef Land, and Spitsbergen; and a light-bellied one (*B. glaucogaster*), which lives in Arctic America, from the west coast of Greenland as far west as the Parry Islands. I would have kept the two forms separate if it were not that a specimen from Novaia Zemlia, mentioned below, belongs to the light-bellied form, and, moreover, this bird has the white on the sides of the neck meeting in front, which character is likewise often found in specimens of the dark form killed in England. The question of the specific distinction of the two forms requires further consideration, but the material at my disposal in the British Museum was not sufficient for me to settle it satisfactorily.

Hab. Taimyr peninsula, Novaia Zemlia, Franz-Josef Land, and Spitsbergen, whence it migrates in winter to the shores of Northern Europe, sparingly down to the basin of the Mediterranean; Arctic America from Greenland as far west as the Parry Islands, and north of lat. 73° as far as land is known to extend (*Seebohm*).

a. Underparts greyish, paler.

a. Ad. sk.	N. America.	The Admiralty [P.].
b. Ad. sk.	Grinnell Land, lat. 82°33′, June.	Capt. Feilden [P.].
c. ♀ ad. sk.	Lat. 82° 30′ (*H. W. Feilden*).	Voy. of H.M.S. 'Alert.'
d. Pull. sk.	Mushroom Point, July (*H. W. Feilden*).	Voy. of H.M.S. 'Alert.'
e. ♂ ad. sk.	Musk Ox Bay, June (*C. Hart*).	Voy. of H.M.S. 'Discovery.'

f. ♂ ad. sk.	Discovery Bay, June (*C. Hart*).	Voy. of H.M.S. 'Discovery.'
g. Ad. st.	Repulse Bay.	Dr. Rae [P.].
h. ♀ ad. sk.	St. Patrick's Bay, Jan. (*C. Hart*).	Voy. of H.M.S. 'Discovery.'
i. ♂ juv. sk.	Cromarty Bay, Feb. (*W. R. O. Grant*).	G. H. Quintin, Esq. [P.].
k. Ad. st.	Devonshire.	Col. Montagu [P.].
l. Juv. sk.	Maldon, Essex (*Major Russell*).	Seebohm Coll.
m. ♂ ad. sk.	Havre, Nov. (*V. Pluche*).	Seebohm Coll.
n. Ad. sk., var.*	Novaia Zemlia, June.	H. W. Feilden and H. Brown [C.].
o, p, q. Sterna.		

b. Underparts dark grey or brown.

r. ♂ ad. sk., var.*	Cookham, Nov. (*W. Briggs*).	Tweeddale Coll.
s. Ad. sk., var.*	Devonshire.	Col. Montagu [P.].
t, u. Imm. et juv. sk.	Maldon, Essex (*Major Russell*).	Seebohm Coll.

7. Branta nigricans.

Anas bernicla, *Penn.* (*nec Linn.*) *in Cook's Voy. Pacif.* ii. p. 366 (Kamtschatka) (1784).

Anser brenta, part., *Pall. Zoogr. Rosso-As.* ii. p. 229 (*ex* America) (1811); ? *Swinh. P. Z. S.* 1863, p. 323 (China).

Anser nigricans, *Lawr. Ann. Lyc. N.Y.* iv. p. 171, pl. xii. (1846); *Hartl. Naumannia*, 1852, p. 2; *Seebh. Hist. Br. B.* iii. p. 508 (1885); *id. B. Jap. Emp.* p. 240 (1890).

Bernicla nigricans, *G. R. Gr. Gen. B.*, App. p. 27 (1849); *Cass. Illustr. B. Calif.* p. 52, pl. x. (1853); *Bp. Compt. Rend.* xliii. p. 648, n. 34 (1856); *Baird, B. N. Am.* p. 767 (1858); *id. Cat. N. Am. B.* n. 571 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 252 (1860); *Blakist. Ibis*, 1863, p. 145; *Lawr. Ann. Lyc. N.Y.* viii. p. 296 (Long Isl.) (1867); *Brown, Ibis*, 1868, p. 425 (Vancouver I.); *Dall & Bann. Tr. Chic. Ac.* i. p. 295 (Alaska) (1869); *Dall, Avif. Aleut. Isl. West. Unal.* p. 6 (1874); *Sclat. P. Z. S.* 1880, p. 502; *Nelson, Bull. Nutt. Orn. Club*, vi. pp. 131–138 (1881); *Ridgw. Nom. N. Am. B.* n. 596 (1882); *Bean, Pr. U.S. Nat. Mus.* 1882, p. 166; *Nels. Cruise 'Corwin,'* p. 94 (1883); *Seebh. Ibis*, 1884, p. 175 (Japan); *Blakist. Amend. List B. Jap.* p. 33 (1884); *B., B., & R. Water-B. N. Am.* i. p. 471, f. p. 472 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 292 (1884–85); *Murd. Exped. to Point Barrow*, p. 117 (1885); *Montl. Bull. Soc. Accl.* 1886, p. 137; *Newt. Dict. of B.* p. 375 (pt. 2, 1893).

Anas bernicla, *Kittl.* (*nec Linn.*) *Denkw.* ii. p. 384 (1858).

Anser bernicla, part., *Schleg. Mus. P.-B.*, Anseres, p. 103 (1866); *Gieb. Thes. Orn.* i. p. 369 (part.) (1872).

Branta nigricans, *Bann. Pr. Ac. Philad.* 1870, p. 131; *G. R. Gr. Hand-list*, iii. p. 76, n. 10576 (1871); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 149 (1885); *Turner, Contr. N. H. Alaska*, p. 141 (1886); *A. O. U. Code of Nom. & Check-list*, p. 128, n. 174 (1886); *Ridgw. Man. N. Am. B.* p. 118, n. 174 (1887); *Nels. Rep. N. H. Coll. in Alaska*, p. 87 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 135 (Bering I.) (1887); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 424 (Liverpool Bay and Franklin Bay) (1891); *Hatch, B. of Minnes.* p. 82 (1892).

* White patches of the neck nearly meeting in front.

Branta bernicla, var. nigricans, *Coues, Key*, p. 284, f. 184 *b* (1872).
Branta bernicla, *b.* nigricans, *Coues, B. N.-West*, p. 557 (1874).
Bernicla torquata, *Blakist. & Pryer (nec Bechst.), Ibis*, 1878, p. 212 (Japan); *id. Tr. As. Soc. Jap.* viii. p. 183 (1880), x. p. 96 (1882).
Bernicla brenta nigricans, *Coues, Check-list*, 2nd ed. p. 112, n. 701 (1882); *id. Key N. Am. B.* 2nd ed. p. 688, n. 70, f. p. 687 (1884); *Cory, Auk*, i. p. 96 (Massachusetts) (1884).
Anser (Brenthus) nigricans, *Rchnw. Orn. Centralbl.* 1882, p. 37.
Bernicla brenta, var. nigricans, *Seebh. Ibis*, 1884, p. 32 (Yokohama).
Anser torquatus, *Brandt (nec Frisch), J. f. O.* 1891, p. 267.

Similar to *B. bernicla*, but with a conspicuous collar of white interrupted only on the nape, the white marks on each side of the neck meeting together in front; belly almost as black as the breast: bill and feet deep black; tarsi black (?). Total length 22–29 inches, wing 13·70–13·40, culmen 1·20–1·35, tarsus 2·20–2·50.

Young. Similar to adult, but collar indistinct or obsolete, the larger wing-coverts and secondaries broadly tipped with white, and feathers of sides and flanks uniform brownish grey, without white edgings.

Hab. Western Arctic America, and across Bering Straits as far as the valley of the Lena (*Seebohm*), migrating south in winter along the Pacific coast to Lower California, and very rarely straggling to the Atlantic coast (Long Island); along the Eastern Asiatic coast it extends to Japan.

a. Ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].
b, c, d. Ad. et juv. sk.	Yokohama (*H. Pryer*).	Seebohm Coll.
e. Ad. sk.	Yokohama (*H. Pryer*).	Capt. Blakiston [P.].
f. Ad. st.	St. Juan de Fuca, Vancouver Isl.	Capt. Kellett and Lieut. Wood [P.].
g. Ad. sk.	Arctic Exped.	Capt. Collinson [P.].
h. Ad. st.	N.W. America.	Capt. Collinson [P.].
i. ♂ ad. st.	Pt. Barrow, Alaska, June (*A. E. Dark*).	Salvin-Godman Coll.
k–o. ♂ ♀ ad. et ♂ juv. sk.	St. Michael's, Alaska, May, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
p. Head & neck.	Liverpool Bay (*R. MacFarlane*).	Salvin-Godman Coll.
q. ♀ ad. sk.	San Diego, California, Dec.	Salvin-Godman Coll.
r, s. Ad. sk.	[Canada.]	Governt. of Canada [P.].

8. Branta ruficollis.

Redbreasted Goose.
Die Moppelgans (Anser peregrinus), *Frisch, Vorstell. Vög. Deutschl. Suppl.* pl. 157 (1763).
Anser ruficollis, *Pall. Spicil. Zool.* fasc. vi. p. 21, t. iv. (1769); *id. Reise*, iii. p. 701 (1776); *Bonn. Enc. Méth.* i. p. 116, n. 20 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 231, n. 326 (1811); *Bewick, Br. B.* ii. p. 261, with fig. (1816); *Nilss. Orn. Suec.* ii. p. 246, n. 252 (1817); *Vieill. N. D.* xxiii. p. 333 (1818); *Dum. Dict. Sc. Nat.* xxv. p. 461 (1825); *Ménétr. Cat. Rais.* p. 56, n. 194 (Lenkoran)

(1832); *K. & B. Wirbelth. Eur.* pp. lxxxiii, 224, n. 390 (1840); *Naum. Vög. Deutschl.* xl. p. 408, t. 293 (♂) (1842); *Schleg. Rev. Crit.* p. cxi (1844); *Midd. Reis. Sibir.* ii. 2, p. 229, pl. xx. f. 3 (egg) (1851); *Kjærb. Orn. Dan.* t. 45 (1852); *Wallengr. Naumannia*, 1854, p. 269 (Scandinavia); *Martin, J. f. O.* 1856, p. 94 (captive); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 297 (1860); *Swinh. P. Z. S.* 1863, p. 323; *Schleg. Mus. P.-B.*, Anseres, p. 102 (1866); *Sund. Svenska Fogl.* pl. 82. f. 2 (1872); *Seebh. P. Z. S.* 1877, p. 806 (egg); *id. Hist. Br. B.* iii. p. 515, pl. 61 (egg) (1885); *Severtz. Zeitschr. ges. Orn.* 1887, p. 22.

Anas torquata, *S. G. Gm. Reise Russl.* ii. p. 179, t. 14 (1774); *Gm. S. N.* i. 2, p. 514, n. 70 (1788).

Anas pulchricollis (errore), *Georgi, Reise Russ. Reich.* p. 167 (1775).

Kleine Kaszarka, *Lepech. Reis. Russ. Reiches*, ii. Anhang, p. 183 (1775).

Casarka minor, *Lepech. ibid.* p. 295, t. 5 (1775).

Red-breasted Goose, *Penn. Arct. Zool.* ii. p. 571 (1785); *Lath. Syn.* iii. 2, p. 455, n. 17 (1785).

Anas ruficollis, *Lath. Gen. Syn. Suppl.* i. p. 297 (1787); *Gm. S. N.* i. 2, p. 511, n. 67 (1788); *Lath. Ind. Orn.* ii. p. 841, n. 23 (1790); *Lewin, B. Gr. Brit.* xii. p. 6 (*nec* pl. 241) (1794); *Bechst. Orn. Taschenb.* ii. p. 425 (1803); *Bewick, Br. B.* ii. p. 289 (1805); *Temm. Man. d'Orn.* p. 533 (1815); *id. Man.* 2nd ed. ii. p. 826 (1820); *Werner, Atlas*, Palmipèdes, pl. 34 (1828); *Less. Tr. d'Orn.* p. 628 (1831).

Anser torquatus, *Bonn.* (*nec Frisch*), *Enc. Méth.* i. p. 122, n. 31 (1790).

Bernicla ruficollis, *Boie, Isis*, 1822, p. 563; *Steph. Gen. Zool.* xii. 2, p. 53, pl. 43 (1824); *Brehm, Isis*, 1830, p. 996; *Gould, B. Eur.* v. pl. 351 (1837); *Eyt. Mon. Anat.* p. 85 (1838); *Bp. Comp. List*, p. 56, n. 402 (1838); *id. Cat. Met. Ucc. Eur.* p. 70, n. 426 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 128 (Berwick) (1844); *id. Gen. B.* iii. p. 607, n. 8 (1844); *Rchnb. Syn. Av.*, Natatores, t. 97. ff. 233, 234 (1845); *Licht. Nomencl. Av.* p. 100 (1854); *Degl. & Gerbe, Ois. Eur.* ii. p. 490 (1867); *Eyt. Syn. Anat.* p. 32 (1869); *Gigl. Ibis*, 1869, p. 242 (Italy); ? *Blyth, Ibis*, 1870, p. 176 (Nagpore); *Gould, B. Gr. Brit.* v. pl. 6 (pt. xviii., 1870); *Elwes & Buckl. Ibis*, 1870, p. 339 (Macedonia); *Malmgr. J. f. O.* 1870, p. 305; *Dyb. J. f. O.* 1873, p. 108 (Irkutsch); *Dress. B. of Eur.* vi. p. 403, pl. 416 (pts. 51, 52, 1876); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 43 (1877); *Finsch, Ibis*, 1877, p. 62; *id. Verh. z.-b. Ges. Wien*, 1879, p. 260 (W. Siberia); *Sclat. P. Z. S.* 1880, p. 502; *Palmén, Med. Soc. Fenn.* vii. p. 144 (Finnland) (1881); *Gurn. Ibis*, 1881, p. 495 (Holland); *B. O. U. List Brit. B.* p. 119 (1883); *Sclat. List Vert. An.* 8th ed. p. 419 (1883); *Radde, Ornis Caucas.* p. 441 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 281 with fig. (1884–85); *Henke, Zeitschr. ges. Orn.* 1885, p. 48, pl. iv. (var.); *Montluz. Bull. Soc. Acclim.* 1886, p. 149, fig. p. 150; *Tristr. Cat. Coll. B.* p. 51 (Lenkoran) (1889); *Saunders, Man. Brit. Birds*, p. 395 (1889); *Lilford, Col. Figs. Br. B.* pt. xxi. pl. — (1892); *Newt. Dict. of B.* p. 376 (pt. 2, 1893).

Leucopareia ruficollis, *Rchnb. Av. Syst. Nat.* p. ix (1852).

Bernicla (Rufibrenta) ruficollis, *Bp. Compt. Rend.* xliii. p. 648, n. 35 (1856).

Rufibrenta ruficollis, *G. R. Gr. Hand-list*, iii. p. 76, n. 10583 (1871).

Anas (Bernicla) ruficollis, *Lemetteil, Bull. Soc. Zool. Fr.* v. p. 75 (Lower Seine) (1880).

Anser (Brenthus) ruficollis, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).
Branta ruficollis, *Salvad. El. Ucc. Ital.* p. 254, n. 353 (1886); *Rchnw. J. f. O.* 1890, p. 81; *Hartert, Kat. Vogelsamml.* p. 227 (1891).
Ptocas ruficollis, *Heine & Rchnw. Nomencl. Mus. Hein.* p. 342 (1890).

Adult male. Entire crown and hind neck black; the black of the crown extends through the eye to the chin and throat, leaving a large round white patch between the eye and the bill; on the ear-coverts a chestnut angular patch, surrounded with white, ending in a white band down the sides of the neck; neck and upper breast rich chestnut, surrounded below by a white narrow band; back, rump, lower breast, and upper abdomen black; upper tail-coverts, lower abdomen, and under tail-coverts white; flanks white, with black bands at the tip of the feathers; wings brown-black, the upper coverts with pale edgings, which on the middle and greater wing-coverts form two greyish bands; tail black: "bill almost black; irides hazel; legs and feet dark brown, almost black" (*Saunders*). Total length about 22 inches, wing 14, tail 6, bill 1, tarsus 2·1.

Adult female. Similar to the male, only somewhat smaller.

Immature bird. The black replaced by dark brown, the auricular patch brown, with some rufous tinge, the neck and breast reddish buff; tips of the rectrices white.

Hab. Ob and Yenesei valleys, where it breeds; Western Siberia, Northern Turkestan, and Caspian Sea, where it winters; accidental in Europe and also in Egypt.

a. ♀ ad. sk.	Kuschowat, Ob, Sept.	Dr. O. Finsch [C.].
b, c. ♂ ad. et imm. sk.	Lenkoran, Jan. (*Henke*).	Seebohm Coll.
d. ♀ ad. st.	Europe (Holland?).	Zoological Society.
e. Ad. st.	Berwick.	Bullock's Coll.

19. NESOCHEN.

	Type.
Nesochen, *Salvad. MS.*	N. sandvicensis.

Range. Confined to the Sandwich Islands.

1. Nesochen sandvicensis.

"Geese . . . . not unlike the Chinese Geese," *Ellis, Narr. Voy.* ii. p. 143 (1782).
Anser sandvicensis, *Vigors, List of Anim. in the Gard. Z. S.* ed. 11, p. 4 (June 1833); *Gieb. Thes. Orn.* i. p. 373 (1872).
Bernicla sandvicensis, *Vigors, P. Z. S.* 1833, p. 65; *Rep. of Counc. Zool. Soc.* 1833, p. 13; *Stanley, P. Z. S.* 1834, pp. 41–43, 81; *Jard. & Selb. Ill. Orn.* ser. 2, pl. viii. (1836); *G. R. Gr. Gen. B.* iii. p. 607, n. 10 (1844); *Hartl. Erst. Nachtr.* p. 19, n. 214 (1846); *Rchnb. Syn. Av.*, Natatores, t. 99. ff. 2355-56 (1850);

Hartl. Arch. f. Naturg. 1852, i. p. 137; *Licht. Nomencl. Av.* p. 100 (1854); *Sclat. P. Z. S.* 1859, p. 206 (incubation); *Dole, Pr. Bost. Soc. N. H.* xii. p. 305 (1869); *Pelz. Verh. z.-b. Ges. Wien*, 1873, p. 159; *Gulliv. P. Z. S.* 1875, p. 488; *Dole, Havai. Alm.* 1879, p. 54; *Finsch, Ibis*, 1880, p. 81; *Sclat. P. Z. S.* 1880, p. 504; *Salv. Cat. B. Strickl. Coll.* p. 529, n. 2577 (1882); *Sclat. List Vert. An.* 8th ed. p. 423, n. 965 (1883); *Montluz. Bull. Soc. Acclim.* 1886, p. 146, fig. p. 147; *Tristr. Cat. Coll. B.* p. 51 (1889) (type!); *Scott Wils. Aves Hawai.* pt. iv. pl. — (1893).

Bernicla sandwicensis, *Less. Compl. de Buff., Ois.* ix. p. 526 (1837); *id. op. cit.* 2nd ed. p. 717 (1838); *Bp. Compt. Rend.* xliii. p. 648, n. 32 (1856); *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 338 (1858); *G. R. Gr. Cat. B. Trop. Isl.* p. 54 (1859); *Hartert, Kat. Vogelsamml.* p. 227, n. 3365 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 293 (1891).

Chloëphaga sandvicensis, *Eyt. Mon. Anat.* p. 81 (1838); *id. Syn. Anat.* p. 26 (1869); *Sclat. P. Z. S.* 1869, p. 529.

Anser hawaiiensis, *Eyd. & Soul. Voy. Bonite, Zool.* i. p. 104, pl. 10 (1841).

Anser hauaiensis, *Peale, U.S. Expl. Exped., Birds*, p. 249, pl. lix. (1848).

Anser hawaiensis, *Hartl. Arch. f. Naturg.* 1852, i. p. 122.

Tænidiestes sandvicensis, *Rchnb. Av. Syst. Nat.* p. ix (1852).

Anser sandwicensis, *Schleg. Dierent.* p. 278 (1864); *id. Mus. P.-B.*, Anseres, p. 106 (1866).

Leucopareia sandwicensis, *G. R. Gr. Hand-list*, iii. p. 76, n. 10582 (1871); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Anser (Brenthus) sandvichensis, *Rchnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 64 (1882).

Adult male. Head and throat black, which colour extends a little below the eye and down the back of the neck; sides of the neck tawny buff, becoming lighter towards the lower part, the feathers blackish at their bases, giving the neck a mottled or striped appearance; upper surface dark umber, the feathers barred with dull whitish; rump dusky black; upper tail-coverts whitish; breast and belly pale greyish brown, feathers darker on flanks, barred with umber and whitish at the tips; abdomen and under tail-coverts pure white; quills and tail dusky black: "irides dark hazel; bill and feet black" (*Scott Wilson*). Total length 22·5 inches, wing 14·3, tail 6, culmen 1·6, tarsus 2·8.

Female. The black extending further down the throat, and occupying a greater space below the eye; feathers on flanks paler than in the adult male; lower breast not so pale, but uniform in colour with the flanks (*Scott Wilson*).

Young. Similar to the female.

Young in down. Upper parts greyish brown; forehead, sides of the head, throat, and middle of the underparts whitish; a white spot on each side of the back at the base of the wing.

Hab. Sandwich Islands.

a–e. Ad. et pull. st.	Sandwich Islands.	Zoological Society.
f. Skeleton.		Zoological Society.

Subfamily VI. CHENONETTINÆ.

Key to the Genera.

a. Tail nearly even; upper wing-coverts white; size large ..... 20. CHLOËPHAGA, p. 128.
b. Tail not even, but distinctly graduated.
b'. Tertials rather broad; upper wing-coverts blue; size large..... 21. CYANOCHEN, p. 139.
c'. Tertials long and narrow; upper wing-coverts grey; size small ..... 22. CHENONETTA, p. 140.

20. CHLOËPHAGA.

	Type.
Chloëphaga, *Eyt. Mon. Anat.* p. 13 (1838)	C. magellanica.
Tænidiestes, *Rchnb. Av. Syst. Nat.* p. ix (1852)	C. antarctica.
Oressochen, *Bann. Pr. Ac. Sc. Philad.* 1870, p. 131..	C. melanoptera.
Chloetrophus, *Bann. Pr. Ac. Sc. Philad.* 1870, p. 131	C. poliocephala.

Chloophaga, *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872).
Tænidiesthes, *Heine, Nomencl. Mus. Hein. Orn.* p. 342 (1890).

Range. Confined to South America.

Key to the Species.

a. Under tail-coverts white.
a'. General plumage white, with no barrings.
a''. Upper scapulars white, each with a black spot along the middle ..... *melanoptera*, p. 129.
b''. Scapulars like the rest of the plumage, white; in specimens not fully adult the primaries are black towards the tip .. *hybrida* ♂, p. 130.
b'. Plumage more or less barred.
c''. Scapulars brown-black; breast with deep black and white barrings; tail entirely white ..... *hybrida* ♀, p. 130.
d''. Scapulars grey; head pale grey.
d'''. Breast entirely white ..... *magellanica* ♂, p. 132.
e'''. Breast more or less barred with black ..... *inornata* ♂, p. 134.
b. Under tail-coverts more or less blackish; plumage distinctly barred with black and rufous.
c'. Head distinctly rufous ..... *magellanica* ♀, p. 132.
d'. Head greyish, scarcely tinged with rufous. *inornata* ♀, p. 134.
c. Under tail-coverts rufous-cinnamon.
e'. Head rufous like the middle of the abdomen ..... *rubidiceps*, p. 136.
f'. Head grey, middle of the breast and abdomen white..... *poliocephala*, p. 137.

1. Chloëphaga melanoptera.

? Otis chilensis, *Mol. Sagg. Stor. Nat. Chili*, p. 260 (1782).
Anser melanopterus, *Eyt. Mon. Anat.* p. 93 (1838) (Lake Titicaca); *Gould in Darwin, Voy. 'Beagle,'* p. 134, pl. 50 (1841); *Fraser, P. Z. S.* 1843, p. 118 (Chili); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Schleg. Mus. P.-B.*, Anseres, p. 100 (1866); *Eyt. Syn. Anat.* p. 41 (1869); *Gieb. Thes. Orn.* i. p. 512 (1872).
Anser montana, *Tsch.* (*nec Gm.*) *Wiegm. Arch.* 1843, i. p. 390, n. 21.
Anser anticola, *Tsch. op. cit.* 1844, i. p. 315, n. 342.
Bernicla melanoptera, *G. R. Gr. List B. Brit. Mus.* iii. p. 128 (1844); *id. Gen. B.* iii. p. 607, n. 5 (1844); *Rchnb. Syn. Av.*, Natatores, t. 101. f. 953 (1845) (*ex Beagle*); *Des Murs in Gay, Hist. de Chile*, i. p. 443 (1848); *Hartl. Naumannia*, 1853, p. 222, sp. 160; *Bibra, Denkschr. k. Ak. Wissensch.* v. 2, p. 131 (1853); *id. J.f. O.* 1855, p. 57; *Cass. in U.S. Astron. Exp.* ii. p. 101 (1856) (Chili); *Sclat. P. Z. S.* 1857, p. 128; *Phil. & Landb. Wiegm. Arch.* 1863, i. p. 185; *Sclat. Ibis*, 1864, p. 121; *Pelz. Reis. Novara, Vög.* p. 137 (1865); *Sclat. P. Z. S.* 1867, pp. 320, 334, 339; *Phil. & Landb. Cat. Av. Chil.* p. 40 (1868) (Chili); *Sclat. & Salv. P. Z. S.* 1869, p. 156 (Pitumarca); *Sclat. P. Z. S.* 1871, pp. 545, 700 (Zool. Gard.); *Burm. P. Z. S.* 1872, p. 365; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 2 (1873); *id. P. Z. S.* 1876, p. 362; *Sclat. P. Z. S.* 1880, p. 504; *id. List Vert. An.* 8th ed. p. 420 (1883); *Boeck, MT. orn. Ver. Wien*, 1884, p. 167 (Extract, p. 24) (Puna, Bolivia); *Sclat. P. Z. S.* 1886, p. 401 (Sacaya); *Montluz. Bull. Soc. Acclim.* 1886, p. 164; *Tacz. Orn. Pér.* iii. p. 467 (1886); *Philippi, Ornis*, 1888, p. 160 (Brea); *Sclat. Argent. Orn.* ii. p. 122 (1889); *id. P. Z. S.* 1891, p. 136 (Tarapacá); *B. James, New List Chil. B.* p. 9, n. 143 (1892).
Bernicla anticola, *G. R. Gr. Gen. B.* iii. p. 607, n. 11 (1844).
Anser (Chloephaga) melanopterus, *Tsch. Faun. Per., Aves*, pp. 54, 308 (Puna) (1846).
Chloëphaga melanoptera, *Licht. Nomencl. Av.* p. 100 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 25 (1856); *Burm. La Plata-Reise*, ii. p. 513 (1861); *Sclat. Ibis*, 1864, p. 122; *G. R. Gr. Hand-list*, iii. p. 77, n. 10591 (1871); *Burm. P. Z. S.* 1872, p. 365; *Tacz. P. Z. S.* 1874, p. 554; *Gigl. Viagg. Mag.* pp. 946, 957 (1876).
Oressochen melanopterus, *Bunn. Pr. Ac. Philad.* 1870, p. 131.
Anser (Brenthus) melanopterus, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).
Branta melanoptera, *Hartert, Kat. Vogelsamml.* p. 227, n. 3363 (1891).

Adult male. White; anterior scapulars with a brown spot along the middle; posterior scapulars brown with a greenish tinge; median greater wing-coverts dark green with a purple gloss, forming a speculum, the innermost ones and tertials dark glossy green; primaries and tail-feathers black with a green gloss: "bill cinnabar-red, with the nail black; tarsus, feet, and membranes cinnabar-red, with the nails black; iris grey-brown" (*Phil. & Landb.*). Total length about 28 inches, wing 16·5, tail 6·2, culmen 1·7, tarsus 3·2.

Female. Similar to the male but smaller.

Young partly in down. White; two brown-grey bands on the sides of the upper part of the head, meeting on and extending

down the nape; back brown-grey; on the sides of the rump two white longitudinal bands; scapulars grey with dark spots; tertials and tail-feathers dark glossy green; iris dark brown; feet dark brown; "beak black" (*Rahmer*).

Hab. Western South America, from Peru and Bolivia to Magellan Strait; seen also at Punta Arenas (*Giglioli*).

a. Ad. st.	S. America.	Purchased.
b. Ad. sk.	Peru, June (*Jelski*).	Warsaw Museum [E.].
c. Ad. sk.	Pitumarca, Peru, Aug. (*H. Whitely*).	Salvin-Godman Coll.
d. Ad. sk.	Chili.	Eyton's Coll. [One of the types of the species.]
e. Ad. st.	Chili.	T. C. Bridges, Esq. [C.].
f. Ad. st.	Chili.	Purchased.
g. Ad. st.	Lake Titicaca, Chili.	M. Pentland, Esq. [C.].
h. Ad. st.	Valparaiso.	Sir W. Burnett & Capt. Fitzroy [P.].
i, k. ♂ ad. et ♀ juv. sk.	Cueva Nigra, Prov. of Tarapacá, Feb.	H. B. James, Esq. [P.].
l. ♂ ad. sk.	L. Huasco, Prov. of Tarapacá, Jan.	H. B. James, Esq. [P.].
m, n, o. ♂ ♀ ad. et juv. sk.	Sacaya, March, May.	H. B. James, Esq. [P.].
p, q. Ad. et imm. sk.	Central Chili.	H. B. James, Esq. [P.].
r. Ad. sk.	Prov. Colchagua, Chili (*Reed*).	Salvin-Godman Coll.
s. Pull. sk.	Pampas Argentinas (*Leybold*).	Salvin-Godman Coll.
t. Skeleton.	Chili.	Purchased.

2. Chloëphaga hybrida.

Anas hybrida, *Mol. Sagg. Stor. Nat. Chili*, p. 213 (1782); *id. op. cit.* 2nd ed. p. 198 (1810); *Gm. S. N.* i. 2, p. 502, n. 50 (1788); *Lath. Ind. Orn.* ii. p. 835, n. 6 (1790).

Antarctic Goose, *Forst. It.* pp. 495, 518; *Lath. Syn.* iii. 2, p. 442, n. 7 (1785); *id. Gen. Hist.* x. p. 228 (1824).

Anas magellanica, *Sparrm.* (*nec Gm.*) *Mus. Carls.* fasc. ii. t. 37 (♀) (1787).

Anas antarctica, *Gm. S. N.* i. 2, p. 505, n. 57 (1788); *Lath. Ind. Orn.* ii. p. 835, n. 8 (1790).

Anser hybridus, *Bonn. Enc. Méth.* i. p. 112 (1790); *Vieill. N. D.* xxiii. p. 331 (1818); *Steph. Gen. Zool.* xii. 2, p. 39 (1824); *Dum. Dict. Sc. Nat.* xxxv. p. 471 (1825).

Oie à tête cendrée, *Bonn. op. cit.* p. 117, pl. 31. f. i. (1790).

Anser antarcticus, *Vieill. N. D.* xxiii. p. 328 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 470 (1825); *Less. Voy. Coq.* i. p. 331, pl. 50 (♀) (1826); *id. Man. d'Orn.* ii. p. 409 (1828); *Licht. in Forst. Descr. An.* pp. 334, 335 (note) (1844); *Schleg. Mus. P.-B.*, Anseres, p. 98 (1866); *Gieb. Thes. Orn.* i. p. 369 (1872); *Cab. u. Rchmw. J. f. O.* 1876, p. 329.

Bernicla antarctica, *Steph. Gen. Zool.* xii. 1, p. 59 (1824); *Eyt. Mon. Anat.* p. 84 (syn. emend.), pl. ii. f. 5 (trachea) (1838); *Darwin, Voy. Beagle*, iii. p. 134 (1841) (Tierra del Fuego, Falkland Islands); *G. R. Gr. List B. Brit. Mus.* iii. p. 127 (1844); *id. Gen. B.* iii. p. 607, n. 4 (1844); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *Rchnb. Syn. Av.*, Natatores, t. 98. ff. 397, 948 (1845); *Des Murs in Gay, Hist. de Chile*, i. p. 442 (1848); *Bibra, Denkschr. k. Ak. Wissensch.* v. 2, p. 131 (1853); *id. J. f. O.* 1855, p. 57; *Cass. U.S. Astron. Exp.* ii. p. 200, pl. xxiii. (♂ ♀) (1856) (Coast of Chili); *Gould, P. Z. S.* 1859, p. 96 (egg); *Sclat. P. Z. S.* 1860, p. 388; *Abbott, Ibis*, 1861, p. 159; *Ph. & Landb. Wiegm. Arch.* 1863, i. p. 199; *iid. Cat. Av. Chil.* p. 40 (1868); *Sclat. Ibis*, 1864, pp. 121, 122; *Pelz. Reise Novara, Vög.* p. 136 (1865); *Sclat. P. Z. S.* 1867, pp. 320, 334, 339; *Cunningham, Ibis*, 1868, p. 127; *Eyt. Syn. Anat.* p. 30 (1869); *Burm. P. Z. S.* 1872, p. 366; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128 (1873); *iid. P. Z. S.* 1876, p. 367, 1878, p. 436; *Sclat. P. Z. S.* 1879, p. 310 (egg), 1880, p. 504; *Sharpe, P. Z. S.* 1881, p. 13; *Sclat. & Salv. Voy. Challenger, Birds*, p. 106 (1881); *Sclat. List Vert. An.* 8th ed. p. 422 (1883); *Montluz. Bull. Soc. Acclim.* 1886, p. 153, fig. p. 154; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 293 (1891); *B. James, New List Chil. B.* p. 9, n. 146 (1892).

Chenelopex leucoptera, part., *Less. Tr. d'Orn.* p. 627 (♂) (1831).

Chenelopex antarctica, *Less. op. cit.* p. 628 (♀) (1831); *id. Compl. de Buff., Ois.* 2nd ed. p. 717 (1838).

Anas ganta, *Forst. Icon. ined.* t. —; *id. Descr. An.* (*ed. Licht.*) p. 336 (1844).

Taenidicstes antarctica, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Bann. Pr. Ae. Philad.* 1870, p. 132; *G. R. Gr. Hand-list*, iii. p. 76, n. 10585 (1871).

Chloëphaga antarctica, *Licht. Nomencl. Av.* p. 100 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 23 (1856); *Sclat. P. Z. S.* 1868, pp. 527, 529 (Falklands); *Sclat. & Salv. Ibis*, 1869, p. 284 (Port Otway), 1870, p. 499 (Goods Bay); *Gigl. Viagg. Magenta*, pp. 927, 938, 942, 944, 947 (1876); *Newt. Dict. of B.* p. 375 (pt. 2, 1893).

Bernicla hybrida, *Ph. & Landb. Wiegm. Arch.* 1863, i. p. 199 (note).

Anser (Brenthus) antarcticus, *Rchnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 64 (1882).

Taenidiesthes antarctica, *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).

Bernicla (Chloëphaga) antarctica, *Oust. Miss. Sc. Cap Horn, Ois.* p. 195 (1891).

Branta antarctica, *Hartert, Kat. Vogelsamml.* p. 227, n. 3364 (1891).

Adult male. Entirely white: "bill black, with a yellow spot at the base; tarsus and feet yellow; irides greyish brown" (*Giglioli, MS.*). Length about 24 inches, wing 15, tail 5, culmen 1·5, tarsus 2·75.

Female. Brown-black; upper part of the head and nape brown; forehead, sides of the head, and neck black with narrow white bands; upper back, scapulars, and tertials brown-black; lower back, rump, upper tail-coverts, lower abdomen, vent, under tail-coverts, and tail pure white; breast, abdomen, sides, and flanks deep black, handsomely barred with white; lower and median wing-coverts,

secondaries, and under wing-coverts white; greater wing-coverts metallic green, forming a speculum, tipped with white, and with a black band before the tip; primaries and their coverts black: "bill flesh-colour; tarsus and feet yellow; irides greyish brown" (*Giglioli, MS.*). Total length 23 inches, wing 14, tail 5, culmen 1·4, tarsus 2·2.

Hab. Patagonia, Straits of Magellan to Chiloe, Tierra del Fuego, and Falkland Islands.

a. ♂ ad. st.	Antarctic Exp.	Capt. King [C.].
b. Imm. st.	Straits of Magellan.	Zool. Soc.
c, *d*. ♂ ♀ ad. sk.	Straits of Magellan.	Sir R. Murchison [P.].
e, *f*. ♂ ♀ ad. sk.	Port Henry, Str. of Magellan, Feb.	Dr. Coppinger [C.].
g. Pull. sk.	Str. of Magellan, Nov.	Dr. Coppinger [C.].
h, *i*. ♂ ♀ ad. sk.	Hermite Is., Oct., Nov.	McCormick Bequest.
k, *l*. ♂ ad. st., ♀ ad. sk.	Hermite Is., Sept.	Antarctic Exp. [C.].
m. ♂ ad. sk.	Cape Horn.	Antarctic Exp. [C.].
n-*q*. ♂ ♀ ad. et juv. sk.	Penguin Is.	Challenger Exp. [C.].
r. ♀ ad. sk.	Falkland Is.	Sir W. Burnett & Capt. Fitzroy [P.].
s. ♂ ♀ ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Falkland Is.	Challenger Exp. [C.].
u. ♀ ad. st.	E. Falkland.	Antarctic Exp. [C.].
v. ♂ nearly ad. st.	St. Salvador Bay, Falklands.	Antarctic Exp. [C.].
w. ♂ ad. sk.	Berkeley Sound, Falkland, Aug.	McCormick Bequest.
x. Skeleton.		

3. Chloëphaga magellanica.

White-winged Antarctic Goose, *Brown, Ill.* p. 100, pl. 40 (♂) (1776) (Falkland Islands).

Oie des terres Magellaniques, *D'Aubent. Pl. Enl.* 1006 (♀); *Buff. Hist. Nat. Ois.* ix. p. 68 (1783).

Oie des îles Malouines, *Buff. op. cit.* p. 69 (1783).

Bustard Goose, *Lath. Syn.* iii. 2, p. 440, n. 5 (1785).

Magellanic Goose, *Lath. op. cit.* p. 443, n. 8 (1785); *id. Gen. Hist.* x. p. 231 (1824).

Anas magellanica, *Gm. S. N.* i. 2, p. 505, n. 56 (1788) (♀); *Lath. Ind. Orn.* ii. p. 838, n. 11 (1790); *Yarr. P. Z. S.* 1833, p. 3 (trachea).

Anas leucoptera, *Gm. S. N.* i. 2, p. 505, n. 59 (1788) (♂); *Lath. Ind. Orn.* ii. p. 835, n. 9 (1790); *Dum. Dict. Sc. Nat.* xxxv. p. 469 (1825).

Anser leucopterus, *Bonn. Enc. Méth.* i. p. 113, n. 13, pl. 30. f. 1 (1790); *Vieill. N. D.* xxiii. p. 341 (1818); *Less. Man. d'Orn.* ii. p. 410 (1828); *Hartl. Syst. Verz. Ges. Mus.* p. 119 (1844).

Anser magellanicus, *Bonn. Enc. Méth.* i. p. 117, n. 23, pl. 29. f. 1 (1790); *Vieill. N. D.* xxiii. p. 346 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 470 (1825); *D'Orb. in Cuvier's Règne An., Ois.* pl. 96. f. 3 (♂) (18—?); *Schleg. Mus. P.-B.*, Anseres, p. 99 (part.?) (1866); *Gieb. Thes. Orn.* i. p. 372 (1872).

Bernicla magellanica, *Steph. Gen. Zool.* xii. 2, p. 57 (1824); *G. R. Gr. Gen. B.* iii. p. 607, n. 9 (1844); *Rchnb. Syn. Av.*, Natatores, t. 98. f. 949 (1845); *Des Murs in Gay, Hist. de Chile*, i. p. 443 (1848); *Sclat. Ibis*, 1864, p. 122; *Pelz. Reise Novara, Vög.* p. 136 (1865); *Cunningh. Ibis*, 1868, p. 127; *Sclat. & Salv. P. Z. S.* 1876, p. 363; *Durnf. Ibis*, 1878, p. 400 (Chuput); *Sclat. P. Z. S.* 1880, p. 502; *id. List Vert. An.* 8th ed. p. 420 (1883); *Montluz. Bull. Soc. Acclim.* 1886, p. 155, fig. p. 157; *Tristr. Cat. Coll. B.* p. 51 (1889).

Bernicla leucoptera, *Steph. Gen. Zool.* xii. 2, p. 58 (1824); *Ph. & Landb. An. Un. Chile*, xxi. p. 427 (1862); *iid. Wiegm. Arch.* 1863, i. p. 194.

Chenelopex leucoptera, part., *Less. Tr. d'Orn.* p. 627 (1831).

Chloëphaga magellanica, *Eyt. Mon. Anat.* p. 82, pl. 1. ff. 1, 2 (trachea) (1838); *G. R. Gr. List Gen. B.* p. 73 (1840); *Darw. Voy. 'Beagle,'* iii. p. 134 (1841) (Tierra del Fuego and Falkland Isl.); *Hartl. Syst. Verz. Ges. Mus.* p. 117 (1844); *G. R. Gr. List B. Brit. Mus.* p. 126 (1844); *Hartl. Naumannia*, 1853, p. 222; *Licht. Nom. Av.* p. 100 (1854); *Bp. Compt. Rend.* xliii. p. 648, n. 22 (1856); *Sclat. P. Z. S.* 1857, p. 128, 1858, p. 289; *Gould, P. Z. S.* 1859, p. 96 (egg); *Sclat. P. Z. S.* 1860, p. 387 (syn. emend. ?); *Abbott, Ibis*, 1861, p. 157 (Falkland Isl.); *Sclat. Ibis*, 1864, p. 122; *Sclat. & Salv. Ibis*, 1868, p. 189 (Straits of Magellan); *Sclat. P. Z. S.* 1868, pp. 527, 529 (Falklands); *Ph. & Landb. Cat. Av. Chil.* p. 40 (1868); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Eyt. Syn. Anat.* p. 27 (1869); *Sclat. & Salv. Ibis*, 1870, pp. 499, 500 (Elizabeth Isle); *Bann. Pr. Ac. Philad.* 1870, p. 131; *G. R. Gr. Hand-list*, iii. p. 77, n. 10586 (syn. emend. ?) (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 128, n. 1 (part.) (1873); *Gigl. Viagg. Magenta*, p. 961 (1876); *Garrod, P. Z. S.* 1876, p. 198, f. 2 (skull); *Sclat. P. Z. S.* 1879, p. 310 (eggs); *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Rogeron, Bull. Soc. Accl.* 1888, pp. 12–21; *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 293 (1891); *Newt. Dict. of B.* p. 375 (pt. 2, 1893).

Anser (Brenthus) magellanicus, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 64 (1882).

Bernicla (Chloëphaga) magellanica, *Oust. Miss. Sc. Cap Horn, Ois.* p. 187 (1891).

Branta magellanica, *Hartert, Kat. Vogelsamml.* p. 227, n. 3363 (1891).

Hybrids.

Bernicla dispar ♂ × B. magellanica ♀, *Sclat. & Salv. P. Z. S.* 1876, p. 365, f. *a* (male), *b* (female); *Sclat. List Vert. An.* 8th ed. p. 421, f. *a* (male), *b* (female) (1883).

Adult male. White; head and neck uniform; sides and upper part of the back with the lower part of the hind neck barred with black; lower back and rump greyish black; upper tail-coverts white; vent and under tail-coverts white, the latter edged with blackish on the outer web; scapulars, tertials, and primaries dark grey; smaller and median upper wing-coverts white, the greater ones grey, on the outer web metallic green with a purple gloss, forming a wing-speculum, and tipped with white; secondaries and under wing-coverts white; lateral tail-feathers white, the four middle ones greyish black: bill black; irides brown-black; feet

dark lead-colour. Total length about 26 inches, wing 16·3, tail 5·5, culmen 1·5, tarsus 3·8.

Female. Different from the male. Head and neck greyish rufous; upper back and breast pale rufous, with black bars; abdomen and flanks almost black, with whitish bars; lower back greyish brown, rump and upper tail-coverts almost black; vent and under tail-coverts whitish, the latter stained with brown-black; wing as in the male; tail black: bill black; irides dark brown; feet yellow. Size a little smaller than the male.

Hab. Falkland Islands, Tierra del Fuego, Magellan Straits, and Patagonia.

a. ♀ ad. sk.	No locality.	
b. ♂ ad. st.	Island of Chiloe.	Sir W. Burnett & Capt. Fitzroy [P.].
c. ♂ ad. sk.	Chuput, Patagonia, Sept.	H. Durnford, Esq. [P.].
d–h. ♂ ♀ ad. sk. et st.	Falkland Is., April (*R. J. Smith*).	Antarctic Expedition.
i. ♂ ad. st.	Falkland Is.	Sir W. Burnett & Capt. Fitzroy [P.].
k, l. ♀ ad. et ♂ juv. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.
m. ♀ ad. sk.	East Falkland Is., July.	Voyage of H.M.S. 'Rattlesnake.'
n. ♂ ad. sk.	St. Salvador Bay, Falkland Is., June.	McCormick Bequest.
o. ♂ ad. st.	Berkeley Sound, Falkland Is.	Antarctic Expedition.
p–s. ♂ ♀ ad. sk.	Berkeley Sound, April, May, Dec.	McCormick Bequest.
t. ♂ variety.*	Falkland Islands.	Maidstone Museum [P.].
u. ♀ ad. st.	No locality.	E. Cross, Esq. [P.].
v, w. Skeletons.		

4. Chloëphaga inornata.

? Painted Goose, *Lath. Syn.* iii. 2, p. 443, no. 9 (Staatenland) (1785) (*ex J. Bank's drawings*).

? Anas picta, *Gm. S. N.* i. 2, p. 504, no. 55 (1788); *Lath. Ind. Orn.* ii. p. 836, n. 12 (1790) (? = magellanica); *Forst. Icon. ined.* t. 65; *id. Descr. An.* (*ed. Licht.*) p. 333 (1844).

? Anser pictus, *Bonn. Enc. Méth.* i. p. 117 (1790); *Vieill. N. D.* xxiii. p. 343 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 470 (1825).

? Bernicla picta, *Steph. Gen. Zool.* xii. 2, p. 60 (1824).

Anser inornatus, ♀ (!), *King, P. Z. S.* 1830–31, p. 15 (Straits of Magellan).

Anas inornatus, *Less. Compl. de Buff., Ois.* ix. p. 527 (1837); *id. op. cit.* 2nd ed. p. 718 (1838).

Chloëphaga magellanica, *Fraser* (*nec Gm.*), *P. Z. S.* 1843, p. 118 (Chili); *Sclat. P. Z. S.* 1871, p. 700 (Chili); *Sclat. & Salv. Nom.*

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* Said to be a hybrid between *C. antarctica* and *C. magellanica*, but apparently an albino variety.

Av. Neotrop. p. 128 (part.) (1873); *Barrows, Auk*, 1884, p. 273 (Carhué).

Bernicla magellanica, *Des Murs* (*nec Gm.*) *in Gay, Hist. Chile*, i. p. 443 (1847) (Chiloe); *Cass. U.S. Astron. Exp.* ii. p. 201, pl. xxiv. (1856) (Chili); *Sclat. P. Z. S.* 1872, p. 549 (Rio Negro), 1877, pp. 838, 850 (Patagonia), 1879, p. 818, 1880, p. 704; *id. List Vert. Am.* 8th ed. p. 420 (part.) (1883).

Bernicla inornata, *Des Murs in Gay, Hist. Chile*, i. p. 444 (1847); *Ph. & Landb. An. Un. Chile*, xxi. p. 436 (1862); *iid. Wiegm. Arch.* 1863, i. p. 199; *Sclat. & Salv. P. Z. S.* 1876, p. 367 (note); *Montluz. Bull. Soc. Acclim.* 1886, p. 160.

Chloëphaga picta, *Bp. Compt. Rend.* xliii. p. 648, n. 21 (1856); *Bann. Pr. Ac. Philad.* 1870, p. 131; *Gigl. Viagg. Magenta*, p. 904 (1876).

Chloëphaga inornata, *Bp. Compt. Rend.* xliii. p. 648, n. 24 (1856); *Eyt. Syn. Anat.* p. 22 (1869); *G. R. Gr. Hand-list*, iii. p. 77, n. 10588 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 2 (part.) (1873); *Sharpe, Zool. Ereb. & Terr., Birds*, p. 37, pl. 30 (type) (1875).

Anas inornata, *Sclat. P. Z. S.* 1858, p. 290 (?=magellanica).

Bernicla dispar, *Ph. & Landb. An. Univ. Chile*, xxi. p. 427 (1862); *iid. Wiegm. Arch.* 1863, i. p. 190; *Sclat. Ibis*, 1864, p. 122; *Pelz. Reise Novar., Vög.* p. 137 (1865); *Phil. & Landb. Cat. Av. Chil.* p. 40 (1868); *Sclat. & Salv. Ibis*, 1870, p. 500 (=magellanica); *Burm. P. Z. S.* 1872, p. 366 (Sierra Tinta, Rio Negro); *Sclat. & Salv. P. Z. S.* 1876, p. 364; *Sclat. P. Z. S.* 1880, p. 503; *Montluz. Bull. Soc. Acclim.* 1886, p. 159; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Sclat. Argent. Orn.* ii. p. 123 (part.) (1889); *B. James, New List Chil. B.* p. 9, n. 144 (1892); *Lataste, Act. Soc. Sc. Chili*, iii. p. cxxii (1894).

Bernicla antarctica (*errore*), *Burm. La Plata-Reise*, ii. p. 514 (1861).

Chloëphaga dispar, *Sclat. Ibis*, 1864, p. 122; *id. P. Z. S.* 1867, pp. 320, 334 (Chili); *Eyt. Syn. Anat.* p. 29 (1869); *G. R. Gr. Hand-list*, iii. p. 77, n. 10587 (1871).

Anser magellanicus, part., *Schleg. Mus. P.-B.*, Anseres, p. 99 (1866); *Gieb. Thes. Orn.* i. p. 372 (part.) (1872).

Anser (Brenthus) dispar, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).

Bernicla (Chloëphaga) dispar, *Oust. Miss. Sc. Cap Horn, Ois.* p. 311 (1891).

Bernicla (Chloëphaga) inornata, *Oust. op. cit.* p. 313 (1891).

Hybrids.

Bernicla dispar ♂ × B. magellanica ♀, *Sclat. & Salv. P. Z. S.* 1876, p. 365, ff. *a* ♂, *b* ♀; *Sclat. List Vert. Am.* 8th ed. p. 421, ff. *a* ♂, *b* ♀ (1883).

Similar to *C. magellanica*, but the *male* has the breast and abdomen much more banded with black.

The *female* has the head and upper part of the neck of a dull grey, almost without any of the reddish tinge so conspicuous in the female of *C. magellanica*. Dr. Sclater, in the 'Argentine Ornithology,' describes the male with the rump (or upper tail-coverts ?) and tail-feathers ashy black. I suppose that the description applies

only to immature birds, as in the original description of Philippi and Landbeck the upper tail-coverts and lateral rectrices are said to be white. A specimen in the Turin Museum, evidently moulting, received from Messrs. Philippi and Landbeck, has the upper tail-coverts partly black and partly white.

Young male. The black bands are more numerous, both on the back and lower parts, but not so well-defined as in the adult bird; the speculum is blackish, with no green lustre (*Mus. Taurin.*).

Hab. Central and Southern Chili, and also Magellan Straits; Southern Argentine Republic; breeds on the Lakes of the Chilian Cordilleras.

a. ♂ ad. st.	Chili.	
b. ♂ ad. sk.	Chili (*Leybold*).	Salvin-Godman Coll.
c, d. [♂] ♀ imm. sk.	Chili (*Reed*).	Purchased.
e. ♀ ad. sk.	Chili (*Reed*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Santiago, Chili (*Weisshaupt*).	Salvin-Godman Coll.
g. ♂ imm. st.	Straits of Magellan.	Zool. Soc. (Type of *Anser inornatus*, King.)

5. Chloëphaga rubidiceps.

Chloëphaga poliocephala, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 127, specim. *c, d, e* (1844).

Bernicla inornata, *G. R. Gr.* (*nec King*) *Zool. Voy. Ereb. & Terror, Birds*, pl. 24 (*nec Gen. of B., neque King*) (1846); *Rchnb. Syn. Av.*, Natatores, t. 98. f. 947 (*ex Voy. Ereb. & Terr.*) (18—?); *Scl. Guide to Gard. Z. S.* ed. 5 & 6, p. 16.

Chloëphaga rubidiceps, *Scl. P. Z. S.* 1860, pp. 387, 415, pl. clxxiii. (Falkland Islands), 1861, p. 46; *Abbott, Ibis*, 1861, p. 158 (Falkland Islands); *Sclat. Ibis*, 1864, p. 123; *id. P. Z. S.* 1869, p. 629; *G. R. Gr. Hand-list*, iii. p. 77, n. 10590 (1871); *Sclat. List Vert. An. Z. S.* 1872, p. 245; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 4 (1873); *Sharpe, Zool. Ereb. & Terror, Birds*, p. 37 (1875).

Anser rubidiceps, *Schleg. Mus. P.-B.*, Anseres, p. 102 (1866); *Gieb. Thes. Orn.* i. p. 373 (1872).

Chloëphaga rubiniceps (*errore*), *Eyt. Syn. Anat.* p. 26 (1869).

Chloetrophus rubidiceps, *Bann. Pr. Ac. Philad.* 1870, p. 131.

Bernicla rubidiceps, *Sclat. & Salv. P. Z. S.* 1876, p. 367; *Sclat. P. Z. S.* 1880, p. 503; *id. List Vert. An.* 8th ed. p. 422, n. 963 (1883); *Monthuz. Bull. Soc. Acclim.* 1886, p. 162; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889); *Sclat. P. Z. S.* 1892, p. 472 (breeding).

Anser (Brenthus) rubidiceps, *Rchnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 64.

Bernicla (Chloëphaga) rubidiceps, *Oust. Miss. Sc. Cap Horn, Ois.* p. 312 (1891).

Adult male. Head, upper part of the neck, middle of the abdomen, and under tail-coverts of a cinnamon colour; lower part of the neck, mantle, breast, sides, and flanks rufous, banded with black; rump and upper tail-coverts glossy black; smaller and median upper wing-coverts and under wing-coverts white; greater

upper wing-coverts metallic green, tipped with white; bastard-wing, primaries, and primary-coverts black; secondaries white; tertials and scapulars brown-grey; tail black: bill black; irides almost black; feet yellow, tinged with blackish exteriorly. Total length about 23 inches, wing 13·5, tail 4·5, culmen 1·5, bill from the commissure 1·5, tarsus 2·5.

Female. Similar, but somewhat smaller.

Young birds of the first year assimilate in plumage to the adults, except that the speculum of the wing is of dull black instead of glossy green (*Abbott*).

Hab. Falkland Islands.

a. Ad. sk.	Falkland Islands (*Leconte*).	Salvin-Godman Coll.
b, c. Ad. sk.	Falkland Islands.	Tweeddale Coll.
d. ♂ ad. sk.	Falkland Islands, July.	McCormick Bequest.
e. Ad. sk.	Falkland Islands.	Antarctic Exped. (Type of the species.)
f. Imm. sk.	Falkland Islands.	Antarctic Exped.
g, h. ♂ ad. sk. et ad. st.	St. Salvador Bay, Falkland Is.	Antarctic Exped.
i. Skeleton.	Falklands.	Zool. Soc.

6. Chloëphaga poliocephala.

Bernicla inornata, *G. R. Gr.* (*nec King*) *Gen. B.* iii. p. 607, n. 6 (syn. emend.), pl. 165 (1844); *Rchnb. Syn. Av.*, Natatores, t. 98. f. 946 (*nec* 947) (*ex Gray*) (1845); *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 216 (1846); *Cass. Un. St. Expl. Exp., Mamm. & Orn.* p. 337 (1858) (Tierra del Fuego & Falkland Isl.); *Sclat. Ibis*, 1859, p. 327.

Chloëphaga poliocephala, *G. R. Gr. List B. Brit. Mus.* iii. p. 127 (part., specim. *a, b*) (1844) (descr. nulla); *Sclat. P. Z. S.* 1857, p. 128, 1858, p. 290; *Gould, P. Z. S.* 1859, p. 96; *Sclat. P. Z. S.* 1859, p. 206 (incubation), 1861, p. 46 (Falkland Isl.); *Abbott, Ibis*, 1861, p. 159; *Sclat. Ibis*, 1864, p. 122; *id. P. Z. S.* 1867, p. 335; *Sclat. & Salv. Ibis*, 1868, p. 189 (Oazy Harbour); *Cunningh. Ibis*, 1869, p. 233; *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Eyt. Syn. Anat.* p. 29 (1869); *Sclat. & Salv. Ibis*, 1870, p. 499 (Port Grappler); *Sclat. P. Z. S.* 1871, p. 261 (note); *G. R. Gr. Handlist*, iii. p. 77, n. 10589 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128, n. 2 (part.) (1873); *id. P. Z. S.* 1878, p. 436 (Gray Harbour, Tom Harbour); *Gigl. Viagg. Magent.* pp. 933, 937, 943, 946 (1876); *Sclat. P. Z. S.* 1881, p. 813; *Shufeldt, Pr. U.S. Nat. Mus.* x. pp. 383–384 (skull) (1887).

? Anser leucopterus, *Licht.* (*nec Gm.*) *in Forst. Descr. An.* p. 334 (1844).

? Chloëphaga leucoptera, *Licht.* (*nec Gm.*) *Nom. Av.* p. 100 (1854).

Chloephaga inornata, *Bp. Compt. Rend.* xliii. p. 648, n. 24 (1856).

Bernicla poliocephala, *Sclat. Ibis*, 1859, p. 328; *Pelz. Reise Novara, Vög.* p. 136 (1865); *Burm. P. Z. S.* 1872, p. 366 (Bahia Blanca); *Sclat. P. Z. S.* 1872, p. 549 (Rio Negro); *Sclat. & Salv. P. Z. S.* 1876, p. 366; *Durnford, Ibis*, 1878, p. 400 (Centr. Patagonia); *Sclat. P. Z. S.* 1880, p. 503; *Scl. & Salv. Voy. Chall., Birds*, p. 107 (1881); *Sclat. List Vert. An.* 8th ed. p. 422, n. 962 (1883);

Montluz. Bull. Soc. Acclim. 1886, p. 160; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 247 (1888); *Sclat. Argent. Orn.* ii. p. 124 (1889); *Tristr. Cat. Coll. B.* p. 51 (1889) (Puerto Bueno); *B. James, New List Chil. B.* p. 9, n. 145 (1892); *Sclat. P. Z. S.* 1892, p. 472 (breeding).

Bernicla chiloensis, *Phil. & Landb. An. Univ. Chile*, xxi. p. 427 (1862); *iid. Wiegm. Arch.* 1863, i. p. 149 (Chiloe); *Sclat. Ibis*, 1864, pp. 121, 122 (=poliocephala, *Gr.*); *Phil. & Landb. Cat. Av. Chil.* p. 40 (1868).

Anser poliocephalus, *Schleg. Mus. P.-B.*, Anseres, p. 101 (1866); *Gieb. Thes. Orn.* i. p. 373 (1872).

Chestnut-breasted Goose, *Cunningh. Ibis*, 1868, p. 127.

Chloetrophus poliocephalus, *Bann. Pr. Ac. Philad.* 1870, p. 131.

Anser (Brenthus) poliocephalus, *Reichnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 64 (1882).

Branta poliocephala, *Hartert, Kat. Vogelsamml.* p. 227, n. 3369 (1891).

Bernicla (Chloëphaga) poliocephala, *Oust. Miss. Sc. Cap Horn, Ois.* p. 192 (1891).

Adult. Head and neck greyish plumbeous, paler on the upper part of the head; forehead and periophthalmic feathers whitish; long feathers of the nape tinged with rufous, especially the lower ones; breast and upper back rufous chestnut, the base of the feathers white, banded with black; these bands more or less showing through; lower back greyish; rump and upper tail-coverts black; abdomen white; sides white, regularly banded with black; lower flanks black; under tail-coverts white, but the outer feathers rufous, with the outer web black; scapulars rufous grey, with narrow transverse black bands; lesser and median wing-coverts white; greater wing-coverts glossy green, with coppery reflections on the outer web, forming a distinct speculum, bordered with white posteriorly; tertials greyish brown with an olive cast; primaries and primary-coverts blackish; under wing-coverts white; tail black: "iris orange; beak black; legs orange, upperside with a line of black; feet and claws black, the former with a little orange" (*Durnford*). Total length about 24 inches, wing 13·5, tail 5, culmen 1·15, tarsus 2·6.

Female. Similar.

Hab. Patagonia and Chiloe Island, where it breeds; Southern Chili and Southern Argentine in winter: rarely in the Falkland Islands.

a. Ad. st.	No locality.	John Barrow, Esq. [P.].
b. ♂ ad. sk.	Chili (*Leybold*).	Salvin-Godman Coll.
c. Ad. sk.	S. Chili.	H. B. Jones, Esq. [P.].
d. Ad. sk.	Island of Chiloe, W. Coast of Chili.	Sir W. Burnett & Capt. Fitzroy [P.]. (Type of the species.)
e. ♂ ad. sk.	Rio Negro, April.	Salvin-Godman Coll.
f. ♀ ad. sk.	Chupat, Patagonia, Sept.	H. Durnford, Esq. [P.].

g. ♀ ad. sk.	Alert Bay, W. Coast of Patagonia, Dec. (*Dr. Coppinger*).	Voyage of H.M.S. 'Alert.'
h. ♀ pull. sk.	Port Henry, Dec. (*Dr. Coppinger*).	Voyage of H.M.S. 'Alert.'
i. ♀ ad. sk.	Neesham Cove, Str. of Magellan, Feb. (*Dr. Coppinger*).	Voyage of H.M.S. 'Alert.'
k. ♂ ad. sk.	Gray Harbour, Messier Channel.	'Challenger' Exped.
l–o. ♂ ad. et pull. sk.	Tom Harbour, Jan.	'Challenger' Exped.
p. Ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll. Zool. Soc.
q, r. Pull. sk. et st.		
s. Skeleton.		

21. CYANOCHEN.

Type.

Cyanochen, *Hartl. fide Bp. Compt. Rend.* xliii. p. 648 gen. 10 (1856) ..... C. cyanopterus.
Cyanauchen, *Schleg.* 1867 (*fide G. R. Gr. Hand-list*, iii. p. 76, 1871).

Range. Confined to Abyssinia and Shoa.

1. Cyanochen cyanopterus.

Bernicla cyanoptera, *Rüpp. Syst. Uebers.* pp. 129, 137, n. 488, t. 49 (Shoa) (1845); *G. R. Gr. Gen. B.*, App. p. 27 (1849); *Des Murs in Lefebvre, Voy. Abyss.* vi. p. 169, pl. xiv. (1845–50); *Rchnb. Syn. Av. Novit.* n. iv. Natatores, t. 99. f. 2354 (1850); *Heugl. Syst. Uebers.* n. 785 (1856); *id. J. f. O.* 1862, pp. 293, 306; *id. Peterm. Geogr. Mitth.* 1869, p. 416; *Heugl. Reise nach Abyss.* 1861–62, pp. 309, 317 (1868); *Eyt. Syn. Anat.* p. 30 (1869); *Blanf. Geol. & Zool. Abyss.* p. 439 (1870); *Finsch, Tr. Zool. Soc.* vii. p. 329 (1870); *Selat. P. Z. S.* 1880, p. 502; *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 241 (Shoa) (1884); *Montluz. Bull. Soc. Acclim.* 1886, p. 151, fig. p. 152.

Cyanochen cyanopterus, *Hartl. fide Bp. Compt. Rend.* xliii. p. 648, n. 26 (1856); *G. R. Gr. Hand-list*, iii. p. 76, n. 10584 (1871); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (Woggera) (1890).

Anser cyanopterus, *Schleg. Mus. P.-B.*, Anseres, p. 96 (1866); *Gieb. Thes. Orn.* i. p. 370 (1872).

Branta cyanoptera, *Heugl. Orn. N.O.-Afr.* ii. p. 1292 (1873); *Hartert, Kat. Vogelsamml.* p. 227 (1891).

Anser (Brenthus) cyanoptera, *Rchnw. Orn. Centralbl.* 1882, p. 37.

Adult. Head and neck ashy, somewhat darker on the hind part; back, scapulars, and underparts brown, the feathers, especially on the latter, with pale grey edges, producing a mottled appearance; rump and upper tail-coverts grey, with a bluish tinge; under tail-coverts whitish; upper wing-coverts lead-blue; primaries and tertiaries glossy black; secondaries glossy green, with a narrow white edge at the tip; under wing-coverts greyish brown, the median ones whitish: "bill and feet blackish: irides hazel-brown" (*Antinori*). Total length about 26 inches, wing 15, tail 6, culmen 1·4, tarsus 2·55.

Female. Similar to the male.

Young in down. Upper parts blackish brown, underparts yellowish white; a broad superciliary band, a patch on the scapular region, a band across the wings and two on the sides and flanks yellowish white (*Mus. Taurin.*).

Hab. Abyssinia and Shoa.

a, b. ♀ ad. st. et sk.	Shoa, May, June (*Harris*).	India Museum [P.].
c. Ad. sk.	Shoa (*Harris*).	India Museum [P.].

22. CHENONETTA.

	Type.
Chenonetta, *Brandt, Descr. et Ic. An. Ross. Nov.* i. p. 5 (1836)	C. jubata.
Chlamydochen, *Bp. Compt. Rend.* xliii. p. 648, gen. 11 (1856)	C. jubata.

Range. Confined to Australia.

1. Chenonetta jubata.

Hawkesbury Duck, *Lath. Syn. Suppl.* ii. p. 358, fig. in frontispiece (1801).

Anas jubata, *Lath. Ind. Orn.* App. p. lxix, n. 3 (1801); *Vieill. N. D.* v. p. 110 (1816); *Dum. Dict. Sc. Nat.* vi. p. 388 (1817); *Brandt, Ic. An. Ross. Nov.* i. p. 5 (1836).

Anser subata (*errore*), *Vieill. Enc. Méth.* i. p. 358 (1823).

Bernicla jubata, *Steph. Gen. Zool.* xii. 2, p. 63 (1824); *Eyt. Mon. Anat.* p. 89 (1838); *G. R. Gr. Gen. B.* iii. p. 607, n. 3 (1844); *id. List B. Brit. Mus.* iii. p. 128 (1844); *Gould, B. Austr.* vii. pl. 18 (pt. xxi., 1845); *Rchnb. Syn. Av.*, Natatores, t. 98. ff. 944–45 (1845), t. 99. ff. 2352–53 (1850) (*ex Gould*); *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 215 (1846); *Licht. Nomencl. Av.* p. 100 (1854); *Sclat. P. Z. S.* 1864, p. 587 (Zool. Gard.); *Müll. P. Z. S.* 1869, p. 280 (Zool. Gard. of Melbourne); *Eyt. Syn. Anat.* p. 34 (1869); *Diggl. B. Austr.* ii. pl. 110 (1872); *Sclat. P. Z. S.* 1880, p. 504; *Salv. Cat. B. Strickl. Coll.* p. 529 (1882); *Sclat. List Vert. An.* 8th ed. p. 420 (1883); *Montluz. Bull. Soc. Acclim.* 1886, p. 137, fig. p. 138 (1886); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Tristr. Cat. Coll. B.* p. 51 (1889).

Anser lophotus, *Brandt, in Mus. Petrop.* (*cf. Descr. et Ic. An. Ross. Nov.* i. p. 5, 1836).

[Chenonetta] jubata, *Brandt, Descr. et Ic. An. Ross. Nov.* i. p. 5 (1836).

Chlamydochen jubata, *Bp. Compt. Rend.* xliii. p. 648, n. 27 (1856); *Gould, Handb. B. Austr.* ii. p. 354 (1865); *Rams. Ibis*, 1866, p. 335 (Port Denison); *G. R. Gr. Hand-list*, iii. p. 76, n. 10577 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 146 (1872); *Rams. P. Z. S.* 1877, p. 345; *North, Cat. Nests and Eggs Austr. B.* p. 336 (1889).

Chenalopex lophotus, *Bp. Compt. Rend.* xliii. p. 649, n. 45 (1856).

Anser jubatus, *Schleg. Mus. P.-B.*, Anseres, p. 97 (1866); *Gieb. Thes. Orn.* i. p. 372 (1872).

Chenonetta lophotus, *G. R. Gr. Hand-list*, iii. p. 74, n. 10559 (1871).

Branta (Chlamydochen) jubata, *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 649 (1878); *id. Tab. List Austr. B.* p. 22, n. 660 (1888).
Anser (Brenthus) jubatus, *Rchnw. Orn. Centralbl.* 1882, p. 37; *id. Vög. zool. Gärt.* p. 65 (1882).
Chloëphaga jubata, *Rogeron, Bull. Soc. Acclim.* 1889, pp. 478–485, 569–576, with two cuts.
Chlamydochen jubatus, *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 342 (1890).
Branta jubata, *Hartert, Kat. Vogelsamml.* p. 227 (1891).

Adult male. Head and neck rich brown; the lengthened plumes down the back of the neck brown-black; back, lesser wing-coverts, and tertiaries grey; lower part of the back, rump, and upper tail-coverts black; breast grey, each feather broadly tipped with greyish white, and spotted with black on each side, giving the whole a mottled appearance; sides and flanks grey, delicately pencilled with wavy lines of black; abdomen, vent, and under tail-coverts deep glossy black; scapulars grey, broadly edged on the outer web, and narrowly on the inner, with black; a glossy green speculum across the secondaries, which are broadly tipped with white; also the greater wing-coverts tipped with white, the white tips forming two bands above and below the speculum, which is black anteriorly; bastard-wing, primary-coverts, and primaries glossy brown-black; under wing-coverts and under surface of the quills towards the base white; tail glossy black: "bill olive-brown, irides very dark brown; legs and feet dark brown" (*Gould*). Total length 20 inches, wing 11, tail 4, culmen 1·15, tarsus 1·42.

Female. Similar to the male, but the head and neck paler brown, the former speckled with white on the sides of the face; upper parts greyish brown, scapulars and tertials blackish on the outer webs; green speculum less conspicuous; breast, sides, and flanks brown, each feather broadly barred and tipped with white; abdomen, vent, and under tail-coverts white.

Hab. Australia.

a. ♂ ad. st.	Australia.	
b. ♂ ad. sk.	Australia.	H. J. Elwes, Esq. [P.].
c, d. ♂ ♀ ad. sk.	Australia.	Salvin-Godman Coll.
e. ♀ ad. sk.	Australia.	Lady Carrington [P.].
f–i. ♂ ♀ ad. sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
k. ♂ ad. sk.	W. Australia.	Capt. Sir G. Grey [P.].
l. ♂ imm. sk.	W. Australia, April.	Hume Coll.
m. ♂ ad. sk.	Queensland.	Mrs. Simpson [P.].
n, o. ♂ ♀ ad. st.	Murray River.	Capt. Sir G. Grey [P.].

Subfamily VII. ANATINÆ.

Key to the Genera.

a. Lower portion of tarsus in front without transverse scutellæ, but covered with small reticulate scales ..... 23. DENDROCYCNA, [p. 144.

b. Lower portion of tarsus in front with a row of transverse scutellæ.

b'. Wing-speculum more or less conspicuous, but always present.

b''. Outer web of tertials chestnut; upper wing-coverts white, except in *Chenalopex jubatus*, which has them black; size rather large.

*b*³. Edges of the bill with no prominent lamellæ ..... 24. CHENALOPEX, [p. 166.

*c*³. Edges of the bill with more or less prominent lamellæ.

*c*⁴. Bill broader towards the tip than at the base; culmen rather concave; lamellæ more developed towards the tip of the upper mandible; lower mandible with the lamellæ not projecting outwardly; feet flesh-colour: sexes similar .. 25. TADORNA, p. 170.

*d*⁴. Bill not broader towards the tip than at the base; culmen almost straight; lamellæ equally developed along the inner edge of the upper mandible; lamellæ on the edge of the lower mandible projecting outwardly; bill and feet dark: sexes dissimilar ..... 26. CASARCA, p. 177.

c''. Outer web of tertials not chestnut; tail-feathers not broad and not rounded at the tip, but usually more or less pointed; colouring of the plumage more or less mottled, not in large uniform patches, except on the wing-coverts.

*d*³. Bill not spatulate.

*e*⁴. Upper wing-coverts not blue, but of a more or less dark grey.

*e*⁵. Tail moderate, with the central tail-feathers not very long.

*e*⁶. Bill broad, about the length of the head ..... 27. ANAS, p. 187.

*f*⁶. Bill not very broad, more or less compressed, and shorter than the head.

*f*⁷. Speculum generally with metallic gloss, sometimes black, or black and white.

f^8. Tertials or inner secondaries sickle-shaped; upper and under tail-coverts reaching beyond the tail; central tail-feathers not lengthened beyond the tip of the lateral ones ..... 28. EUNETTA, p. 218.

g^8. Tertials or inner secondaries not sickle-shaped, but straight.

g^9. Bill not fringed with a soft membrane near the tip of the apical portion.

g^{10}. Lamellæ of the upper mandible quite prominent; central tail-feathers scarcely extending beyond the lateral ones; speculum black outwardly, white inwardly ..... 29. CHAULELASMUS, [p. 221.

h^{10}. Lamellæ of the upper mandible scarcely prominent; central tail-feathers more or less acuminate and extending somewhat beyond the lateral ones.

h^{11}. Bill small, and gradually tapering towards the tip ..... 30. MARECA, p. 227.

i^{11}. Bill moderate, not gradually tapering towards the tip, where it is more rounded and comparatively broader than in *Mareca*; scapulars and tertials longer and narrower ..... 31. NETTION, p. 238.

h^9. Bill fringed on the edges of the apical portion of the upper mandible with a narrow soft membrane.

i^{10}. Lamellæ extremely developed; wings apt for flight..... [p. 287. 34. ELASMONETTA,

f^{10}. Lamellæ moderate; wings very small, useless for flight .. [p. 289. 35. NESONETTA,

f^5. Tail long, with the central feathers very long and acuminate.
f^6. Culmen of the bill almost straight; speculum broader than the light band at the tip of the secondaries ..... 32. Dafila, p. 270.
g^6. Culmen not quite straight, but somewhat concave; speculum very narrow, much narrower than the rufescent band at the tip of the secondaries .. 33. Pœcilonetta, [p. 281.
f^4. Upper wing-coverts blue or bluish grey ..... 36. Querquedula, [p. 290.
e^3. Bill spatulate.
g^4. No soft membrane on the sides of the bill, towards its tip; upper wing-coverts blue ..... 37. Spatula, p. 306.
h^4. Bill with a soft membrane on the sides, towards the tip ..... 38. Malacorhynchus, [p. 319.
e'. Speculum wanting, combined with general colouring grey or greyish brown.
d''. Tail normal, of moderate length; bill rather long, equal in length to the head, not broader at the tip than at the base; culmen distinctly concave.. 39. Marmaronetta, [p. 320.
e''. Tail very short, bill broader towards the tip than at the base.
f^3. Bill longer than the head, at the base much higher than broad, with the culmen much concave and with the nail bent backwards as in *Erismatura* ..... 40. Stictonetta, [p. 324.
g^3. Bill about the length of the head, nearly as high as broad at the base, with the culmen not very concave, and with the nail almost perpendicular; plumage like that of the species of the genus *Erismatura* .. [p. 325.
41. Heteronetta,

23. DENDROCYCNA *.

	Type.
Dendronessa, *Wagl. Isis*, 1832, p. 281 (*nec Sw.* 1831) ..	? D. arcuata.
Dendrocygna, *Sw. Class. B.* ii. p. 365 (1837)	D. arcuata.
Leptotarsis, *Gould, MS.*; *Eyt. Mon. Anat.* p. 29 (1838).	D. eytoni.
Dendrocycna, *Sclat. P. Z. S.* 1880, p. 508 (nomen emend.).	

Range. Tropical regions of America, Africa, Asia, Australia, and Polynesia, as far east as the Fiji Islands.

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* *Cf.* Sclater, P. L., "Note on the Geographical Distribution of the Ducks of the Genus *Dendrocygna*" (P. Z. S. 1864, pp. 299–301); "Additional Notes on the *Anatidæ* of the Genera *Dendrocygna* and *Tadorna*" (P. Z. S. 1866, pp. 148–150).

Key to the Species.

a. Feathers of the flanks normal, viz. not very long; under wing-coverts uniform or nearly so.
  a'. Smaller upper wing-coverts deep chestnut.
    a''. Anterior part of the head and throat white. *viduata*, p. 145.
    b''. Anterior part of head not white.
      b^3. Upper tail-coverts whitish buff, uniform or spotted with black.
        b^4. Breast uniform rufous-chestnut, with no black markings ..... *fulva*, p. 149.
        c^4. Breast rufous-chestnut, more or less with black markings ..... *arcuata*, p. 153.
      c^3. Upper tail-coverts chestnut ..... *javanica*, p. 156.
  b'. Smaller upper wing-coverts not deep chestnut.
    c''. Abdomen and sides uniform black, sharply defined from the breast, or whitish with narrow greyish bars; quills basally white.
      d^3. Mantle chestnut, uniform with the back ..... *autumnalis*, p. 159.
      e^3. Mantle greyish brown, sharply defined from the chestnut back ..... *discolor*, p. 161.
    d''. Abdomen and sides not uniform black, but, like the breast, varied with white or black spots; quills not white basally.
      f^3. Upper tail-coverts uniform black; larger, wing 10·5 inches ..... *arborea*, p. 162.
      g^3. Upper tail-coverts black, with white spots or bars; smaller, wing 8·5 inches.. *guttata*, p. 164.
b. Feathers of the flanks very long and acuminate; under wing-coverts banded; wing with no chestnut colour; sides of the breast reddish, barred with black ..... *eytoni*, p. 165.

1. Dendrocycna viduata.

Anas viduata, *Linn. S. N.* i. p. 205, n. 38 (1766) (Cartagena, *Jacquin*); *Jacquin, Beytr.* i. p. 3, n. 2, t. 1 (1784); *Gm. S. N.* i. 2, p. 536, n. 38 (1788); *Lath. Ind. Orn.* ii. p. 858, n. 65 (1790); *Bonn. Enc. Méth.* i. p. 132 (1790); *Vieill. N. D.* v. p. 164 (1816); *Dum. Dict. Sc. Nat.* vi. p. 383 (1817); *Wied, Reise nach Bras.* pp. 163, 168, 307 (1820), ii. p. 199 (1821); *Licht. Verz. Doubl.* p. 84 (1823); *Steph. Gen. Zool.* xii. 1, p. 102 (1824); *Less. Tr. d'Orn.* p. 634 (1831); *Wied, Beitr.* iv. p. 921 (Brazil) (1832); *d'Orb. Voy.* i. p. 448 (1839); *Tschudi, Consp. Av. Per.* n. 345 (*Wiegm. Arch.* 1844, i. p. 315); *Burm. Thiere Bras.* iii. p. 434 (1856).
Canard du Maragnon, *D'Aubent. Pl. Enl.* n. 808.
Canard à face blanche, *Buff. Hist. Nat. Ois.* ix. p. 255 (1783); *D'Azara, Voy.* (*ed. Sonn.*) iv. p. 343 (1809).
Spanish Duck, part., *Lath. Syn.* iii. 2, p. 525, n. 69 (1785).
Anas viduata β, *Lath. Ind. Orn.* ii. p. 858, n. 65 β (1790).
Pato cara blanca, *D'Azara, Apunt.* iii. p. 440, n. 435 (1805) (Paraguay).
Anas leucopsis, *Vieill.* (*nec Bechst.*) *N. D.* v. p. 116 (1816).
Dendrocygna viduata, *Eyt. Mon. Anat.* p. 110 (1838); *G. R. Gr.*

List B. Br. Mus. iii. p. 132 (Brazil) (1844); *Hartl. Verz. Ges. Mus.* p. 118 (1844); *G. R. Gr. Gen. B.* iii. p. 612, n. 5 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 173–74 (1845); *Tsch. Faun. Per.*, Aves, p. 54 (1845–46); *Hartl. Ind. Azar. Apunt.* p. 28, n. 435 (1847); *Cab. in Schomb. Guiana*, iii. p. 762 (1848); *Blyth, Cat B. Mus. A. S. B.* p. 301 (1849); *Licht. Nomencl. Av.* p. 102 (South Amer.) (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 55 (1856); *Lawr. Ann. Lyc. N. Y.* vii. p. 274 (Cuba) (1860); *Burm. J. f. O.* 1860, p. 266 (Tucuman); *id. La Plata-Reise*, ii. p. 515 (Tucuman) (1861); *Albrecht, J. f. O.* 1861, p. 214; *Gundl. J. f. O.* 1861, p. 344, 1862, p. 179 (Cuba); *Sclat. P. Z. S.* 1864, p. 299 (Guiana, Brazil, Paraguay, etc.); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 388 (1866); *Léot. Ois. Trin.* p. 509 (Trinidad) (1866); *Sclat. & Salv. P. Z. S.* 1866, p. 200 (Ucayali); *Schleg. Mus. P.-B.*, Anseres, p. 90 (1866); *Sclat. & Salv. P. Z. S.* 1869, p. 160 (Rep. Arg.); *Eyt. Syn. Anat.* p. 61 (1869); *Pelz. Orn. Bras.* pp. 319, 459, lviii (1870); *Reinh. Meddel. Fork.* 1870, p. 21 (Brazil); *G. R. Gr. Hand-list*, iii. p. 79, n. 10613 (1871); *Burm. P. Z. S.* 1872, p. 367; *Sclat. & Salv. P. Z. S.* 1873, p. 304 (Ucayali); *iid. Nomencl.* p. 129, n. 5 (1873); *Coues, B. N.-West*, p. 559 (1874); *Gundl. J. f. O.* 1875, p. 377 (Cuba); *Gieb. Thes. Orn.* ii. p. 31 (1875); *Sclat. & Salv. P. Z. S.* 1876, p. 376; *Durnford, Ibis*, 1878, p. 64 (Buenos Ayres); *Sclat. P. Z. S.* 1880, p. 509; *Rchnw. Orn. Centralbl.* 1882, p. 22; *Sclat. List Vert. An.* 8th ed. p. 425 (1883); *B., B., & R. Water-Birds N. Am.* i. p. 481 (1884); *Cory, List B. W. Ind.* i. p. 30 (1885); *Salv. Ibis*, 1886, p. 172; *Tacz. Orn. Pér.* iii. p. 471 (Peru) (1886); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (Venezuela) (1887); *Berl. J. f. O.* 1887, pp. 33, 124 (Paraguay); *Ridgw. Man. N. Am. B.* p. 119 (1887); *Cory, Auk*, 1888, p. 60; *id. B. W. Ind.* p. 261 (1889); *Feild. Ibis*, 1889, p. 500 (Barbados); *Sclat. Argent. Orn.* ii. p. 128 (1889); *Hartert, Kat. Vogelsamml.* p. 228, n. 3384 (1891); *Kerr, Ibis*, 1892, p. 146 (Lower Pilcomayo); *Berl. & Stolzm. P. Z. S.* 1892, pp. 399, 408 (Peru); *Chapm. Bull. Am. Mus. Nat. Hist.* 1894, p. 82 (Trinidad.)

Dendrocygnus viduata, *Brew. Pr. Bost. Soc. N. H.* vii. p. 308 (1860).

Dafila (*errore*) viduata, *Burm. P. Z. S.* 1872, p. 370.

Dendrocycna viduata, *Rchnw. Vög. d. Zool. Gärt.* p. 58 (1882).

Africa.

Anas viduata, *Denh. & Clappert. Travels*, App. xxi. p. 205 (1826); *id. Reise* (*ed. Weimar*, 1827, App. p. 688); *Dub. Orn. Gal.* p. 71, pl. 44 (1839); *Brehm, J. f. O.* 1855, p. 484, 1856, p. 413, 1857, pp. 76, 377, 1858, pp. 470, 471; *Heugl. J. f. O.* 1863, p. 6.

Dendrocygna viduata, *G. R. Gr. List Spec. B. Brit. Mus.* iii. p. 132 (Africa) (1844); *Rüpp. Syst. Uebers.* p. 137, n. 489 (Abyssinia) (1845); *Des Murs, in Lefebvre's Voy. Abyss., Ois.* p. 172 (1845); *Strickl. P. Z. S.* 1850, p. 221 (Kordofan); *id. Ann. & Mag. N. H.* 1852, p. 349 (Kordofan); *Licht. Nomencl. Av.* p. 102 (Africa) (1854); *Hartl. J. f. O.* 1854, p. 303 (Senegal, Gambia, Senaar, Mossambique, Natal); *Cab. ibid.* p. 304 (note); *Hartl. J. f. O.* 1855, p. 361 (Gold Coast); *Brehm, Reisesk.* iii. p. 143 (1855); *Heugl. Syst. Uebers.* p. 66, n. 686 (1856); *Hartl. Orn. Westafr.* p. 247 (1857); *Gurn. Ibis*, 1859, p. 251 (Natal); *Cass. Pr. Ac. Philad.* 1859, p. 175 (Camma and Ogobai); *Heine, J. f. O.* 1860, p. 203; *Hartl. J. f. O.* 1861, p. 272; *id. Orn. Beitr. Faun. Madag.* p. 83 (Madagascar) (1861); *Gurn. Ibis*, 1862, p. 158 (Natal); *Poll. N. T. D.* i. p. 327 (1863);

Heugl. J. f. O. 1863, p. 164; *Hartm. ibid.* p. 463; *Hartl. P. Z. S.* 1863, p. 106 (Kazeh, E. Africa); *Roch & E. Newt. Ibis*, 1863, p. 174 (Madagascar); *E. Newt. ibid.* p. 452 (introduced in Mauritius); *Sclat. P. Z. S.* 1864, p. 114 (Meninga, E. Afr.), p. 299; *Antin. Cat. Descr.* p. 113 (1864); *Hartm. J. f. O.* 1864, p. 150; *A. Newt. P. Z. S.* 1865, p. 837 (Madagascar); *Vins. Voy. à Madag.* p. 4 (1865); *Schleg. P. Z. S.* 1866, p. 426 (Madagascar, Réunion, Mayotte); *id. Mus. P.-B.*, Anseres, p. 90 (1866); *Layard, Birds S. Afr.* p. 349 (1867); *Grand. Rev. et Mag. Zool.* 1868, p. 6; *Schleg. & Poll. Rech. Faun. de Madag.* p. 143 (1868); *Chapm. Trav. S. Afr.* ii. App. p. 423 (1868); *Heugl. Peterm. Geogr. Mitth.* 1869, p. 413; *id. Reise in d. Geb. d. Weiss. Nil*, 1862–64, pp. 51, 384 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 806 (1870); *G. R. Gr. Hand-list*, iii. p. 79, n. 10613 (part.) (1871); *Anderss. B. Damara Land*, p. 338 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1298 (1873); *Rchnw. & Lühder, J. f. O.* 1873, p. 211; *Rchnw. J. f. O.* 1874, p. 374 (Gold Coast); *Bartl. P. Z. S.* 1875, p. 68 (Madagascar); *Bocage, J. f. O.* 1876, p. 294 (Mossamedes), p. 434 (Bissao); *Rchnw. J. f. O.* 1877, p. 11 (Loango); *Hartl. Vög. Madag.* p. 358 (1877); *Fisch. & Rchnw. J. f. O.* 1878, p. 248 (Osi-Tana); *Fischer, ibid.* p. 295, 1879, pp. 295, 296; *Sclat. P. Z. S.* 1880, p. 509; *Shell. P. Z. S.* 1881, p. 601 (Ugogo); *Salv. Cat. B. Strickl. Coll.* p. 530 (Kordofan) (1882); *Holub & Pelz. Beitr. Orn. S.-Afr.* p. 328 (1882); *Milne-Edw. & Grand. Ois. Madag.* p. 729, pl. cclxxv. f. 5 (head) (1882); *Sharpe, Layard's B. S. Afr.* p. 751 (1884); *id. Journ. Linn. Soc., Zool.* xvii. p. 441 (Nyam-Nyam) (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. pp. 242 (Shoa), 276 (Lake Ota) (1884); *Böhm, J. f. O.* 1885, pp. 38, 62, 65, 67, 115; *Fisch. ibid.* p. 115; *Shell. Ibis*, 1885, p. 414 (Somali); *Hartert, J. f. O.* 1886, p. 612 (Niger-Benuë); *Dubois, Bull. Mus. Roy. d'H. N. Belg.* iv. p. 149, n. 192 (1886) (Tanganyika); *Ayres, Ibis*, 1887, p. 64; *Rchnw. J. f. O.* 1887, p. 46 (Kagehi); *Matschie, J. f. O.* 1887, pp. 137, 144; *Shell. Ibis*, 1888, p. 307 (Tangani); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 320 (1888); *Tristr. Cat. Coll. B.* p. 51 (1889); *Rend. Ibis*, 1892, p. 227 (Gambia); *Sibree, Ibis*, 1892, pp. 262, 268, 270 (Madagascar); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 564 (Somali) (1894); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 27, fig. p. 28 (1894).

Dendrocygna personata, *Württemb. in litt., fide Hartl. Jardine's Contr. Orn.* 1850, p. 140; *id. J. f. O.* 1854, p. 304; *Bp. Compt. Rend.* xliii. p. 649, n. 54 (1856); *Kirk, Ibis*, 1864, p. 336 (Zambesi); *Rchnw. J. f. O.* 1890, p. 107 (Kamerun).

Dendrocygnus viduatus, *Brehm, J. f. O.* 1855, p. 488.

Dendrocygna viduata personata, *Rchnw. J. f. O.* 1889, p. 265 (Quilimane); *Hartert, Kat. Vogelsamml.* p. 228, n. 3385 (1891); *Rchnw Mitth. Naturh. Mus. zu Hamb.* x. p. 5 (Quilimane) (1893).*

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* I have very little doubt that the following references belong to the present species; Sonnerat's bird, which has never been properly identified, was probably from the Cape of Good Hope:—

La petite Sarcelle de l'isle de Luçon, *Sonn. Voy. Nouv. Guin.* p. 91, pl. 55 (1776).

Manilla Teal, *Lath. Syn.* iii. 2, p. 557, n. 96 (1785).

Sterna multicolor, *Scop. Del. Flor. et Faun. Insubr.* ii. p. 92, n. 74 (1786) (*ex Sonnerat*).

Anas manillensis, *Gm. S. N.* i. p. 523, n. 91 (1788); *Lath. Ind. Orn.* ii.

Adult. Fore part of the head, chin, and spot on the middle of the throat white; back of the head and upper part of the neck black, lower neck chestnut; back and scapulars brown, the feathers of the upper part of the back with narrow fulvous bars, the feathers of the middle part of the back and the scapulars margined with fulvous; in the centre of the back a chestnut patch; lower back, rump, and upper tail-coverts black; centre of the underparts, vent, and under tail-coverts black; sides and flanks whitish buff, barred with black; lesser wing-coverts chestnut, remainder of the wing-coverts slaty black, the median ones and the tertials with an olive tinge; quills brown-black; tail black; iris dark brown: "bill with nail black, with a grey crescent-like band behind the nail; tarsi and feet with membranes lead-colour" (*Wied*). Total length about 17·5 inches, wing 9, tail 2·5, culmen 2, tarsus 1·9.

Female. Similar.

Immature birds have the middle of the abdomen whitish mixed with black.

Young in down. Pale greyish brown above, whitish below and on the sides of the head; a dark band through the eyes from the forehead backwards; a white band across the occiput; four whitish spots on the sides of the back and two lower down on the sides of the rump.

There is no tangible difference between the American and African birds; occasionally specimens from both localities have the white of the head slightly tinged with fulvous, and the white spot on the middle of the throat not separated by a black band from the white of the chin.

Hab. West Indies, South America as far south as Argentine Republic, Africa south of the Sahara, and Madagascar.

a. Ad. st.	No locality.	Zoological Society.
	American specimens.	
b. Ad. sk.	Bogota.	Salvin-Godman Coll.
c. Ad. sk.	Brit. Guiana.	Sir R. Schomburgk [P.].
d, e. ♂ ♀ ad. sk.	River Rupurumi, Brit. Guiana, May (*H. Whitely*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Lower Ucayale, May (*E. Bartlett*).	H. J. Elwes, Esq. [P.].

p. 875, n. 107 (1790); *Bonn. Enc. Méth.* i. p. 159, pl. 40. f. 4 (1791); *Vieill. N. D.* v. p. 172 (1816); *Dum. Dict. Sc. Nat.* vi. p. 397 (1817).

Querquedula manillensis, *Steph. Gen. Zool.* xii. 1, p. 152 (1824).

Querquedula multicolor, *G. R. Gr. Gen. B.* iii. p. 616, n. 10 (1845); *Bp. Compt. Rend.* xliii. p. 650, n. 97 (1856); *Wald. Tr. Z. S.* ix. p. 242 (1875); *Tweedd. Orn. Works*, p. 404 (1881); *Wardl. Rams., Tweedd. Orn. Works*, p. 660 (1881).

Anas (Querquedula) manillensis, *v. Mart. J. f. O.* 1866, p. 31.

Nettapus pulchellus, part., *Schleg. Mus. P.-B.*, Anseres, p. 77 (1866).

Anserella coromandelica, part.?, *G. R. Gr. Hand-list*, iii. p. 77, n. 10594 (1871).

g. Ad. st.	Brazil.	Lord Stuart de Rothsay [P.].
h. ♂ ad. sk.	Cuyaba, Brazil, March (*Natterer*).	Salvin-Godman Coll.
i, *k*. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
l. ♂ ad. sk.	Buenos Ayres, Sept.	H. Durnford, Esq. [P.].
	African specimens.	
m. Pull. st.	? W. Africa.	Purchased.
n. Ad. sk.	Gambia.	H. J. Elwes, Esq. [P.].
o. Ad. sk.	Fantee.	H. F. Blissett, Esq. [P.].
p. Ad. sk.	Fantee (*Ussher*).	Shelley Coll.
q–*t*. ♂ ♀ ad. sk.	Accra, May (*J. Smith*).	Shelley Coll.
u. Ad. sk.	Benue R.	Capt. Mochler Ferryman [P.].
v, *w*. Ad. st. et sk.	Lake Tchad.	Major Denham [P.].
x. Ad. sk.	Nyam-nyam.	F. Bohndorff, Esq. [C.].
y. ♀ ad. sk.	Lamu, Aug.	F. J. Jackson, Esq. [P.].
z. Ad. sk.	Mamboio (*Kirk*).	Shelley Coll.
a'. Ad. sk.	Ugogo (*Kirk*).	Shelley Coll.
b', *c'*, *d'*. ♂ ♀ ad. sk.	Lake Shirwa, Nyassa-land, Feb. (*Whyte*).	H. H. Johnston, Esq. [P.].
e'. Ad. sk.	Lake Nyassa (*Kirk*).	Livingstone Exped.
f'–*g'*. Ad. sk.	Zambesi (*Bradshaw*).	Shelley Coll.
h'. Ad. sk.	Zambesi (*Kirk*).	Livingstone Exp.
i'. ♀ ad. sk.	Potchefstroom, Nov. (*J. Taylor*).	Salvin-Godman Coll.
k'. Juv. sk.	No locality.	
l'. Ad. sk.	Madagascar.	Purchased.
m'. Ad. sk.	West of Antananarivo, Madagascar, July (*Deans Cowan*).	Tweeddale Coll.
n'. Ad. sk.	Madagascar.	Seebohm Coll.
o'. Skeleton.		

2. Dendrocycna fulva.

Millouin du Mexique, *Briss. Orn.* vi. p. 390 (Mexico) (1760).

Penelope (!) mexicana, *Briss. ibid.*

Mexican Pochard, *Lath. Syn.* iii. 2, p. 524 (1785).

Anas fulva, *Gm. S. N.* i. p. 530, n. 100 (1788) (*ex Brisson*); *Lath. Ind. Orn.* ii. p. 863, n. 79 (1790); *Bonn. Enc. Méth.* i. p. 137 (1790); *Vieill. N. D.* v. p. 127 (1816); *Dum. Dict. Sc. Nat.* vi. p. 384 (1817); *Wagl. Isis*, 1831, p. 532 (Mexico); *Wied, Beitr.* iv. p. 918 (1832) (Brazil); *Burm. Syst. Ueb. Thier. Bras.* iii. p. 435 (1856).

Pato roxo y negro, *Azara, Apunt.* iii. p. 443, n. 436 (Paraguay) (1805); *id. Voy., Sonn. ed.* iv. p. 344 (1809).

Anas bicolor, *Vieill. N. D.* v. p. 136 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 355 (1823); *G. R. Gr. Gen. B.* iii. p. 616, n. 17 (1845), App. p. 28 (1849); *Hartl. Ind. Azara*, p. 28, n. 436 (1847); *Léot. Ois. Trin.* p. 514 (Trinidad) (1866); *Burm. P. Z. S.* 1872, p. 370 (Paraná).

Anas virgata, *Wied, Reise Bras.* i. p. 322 (1820).
Fuligula fulva, *Steph. Gen. Zool.* xii. 1, p. 204 (1824).
Fuligula bicolor, *Steph. l. c.* p. 208 (1824).
Dendronessa fulva, *Wagl. Isis*, 1832, p. 282.
Nyroca fulva, *G. R. Gr. Gen. B.* iii. p. 621, n. 7 (1844).
Anas sinuata, *Licht. in Mus. Berol.* (*fide Bp.*).
Anas collaris, *Merrem* (*nec Donov.*) *in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 31 (1841) (*ex Azara*).
Dendrocygna fulva, *Hartl. Syst. Verz. Ges. Mus.* p. 118, n. 3 (Brazil) (1844); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 58 (1856); *Baird, B. N. Am.* p. 770 (California) (1858); *id. op. cit.* ed. 1860, pl. 63. f. 1; *id. Cat. N. Am. B.* n. 575 (1859); *Xantus, Pr. Ac. Philad.* 1859, p. 192 (Fort Tejon); *Burm. J. f. O.* 1860, p. 266 (Tucuman); *id. La Plata-Reise*, ii. p. 514 (1861); *Sclat. P. Z. S.* 1864, p. 301, 1866, p. 149; *Dress. Ibis*, 1866, p. 42 (Texas); *Coues, Pr. Ac. Philad.* 1866, p. 98 (Arizona); *Schleg. Mus. P.-B.*, Anseres, p. 87 (1866); *Moore, Am. Nat.* iv. p. 126 (1871) (New Orleans, Louisiana); *Sclat. P. Z. S.* 1867, p. 687 (Zool. Gard.); *Sclat. & Salv. P. Z. S.* 1869, p. 635 (Argentina); *Blyth, Ibis*, 1870, p. 176 (=major); *Pelz. Orn. Bras.* pp. 319, 459 (1870); *G. R. Gr. Hand-list*, iii. p. 79, n. 10616 (1871); *Burm. P. Z. S.* 1872, p. 367; *Coues, Key*, p. 284 (1872); *id. Check-list*, n. 486 (1873); *Sclat. & Salv. Nomencl.* p. 129 (1873); *Coues, B. N.-West*, p. 558 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 313 (1874); *Gieb. Thes. Orn.* ii. p. 31 (1875); *Sclat. & Salv. P. Z. S.* 1876, p. 372; *Durnf. Ibis*, 1878, p. 63; *Merrill, Pr. U.S. Nat. Mus.* i. p. 170 (1878); *Rchnw. Orn. Centralbl.* 1882, p. 22; *White, P. Z. S.* 1882, p. 625; *Coues, Check-list*, 2nd ed. p. 112, n. 705 (1882); *Sclat. List Vert. An.* 8th ed. p. 427 (1883); *Coues, Key*, 2nd ed. p. 689, n. 705 (1884); *Tacz. Orn. Pér.* iii. p. 470 (Moyobamba) (1886); *A. O. U. Code of Nom. and Check-list*, p. 129, n. 178 (1886); *Ridgw. Man. N. Am. B.* p. 119 (1887); *Berl. J. f. O.* 1887, p. 124; *Sclat. Arg. Orn.* ii. p. 126 (1889); *Tristr. Cat. Coll. B.* p. 51 (W. Mexico) (1889); *Allen, Bull. Am. Mus. N. H.* ii. p. 269 (1889); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 297 (1891); *Palacky, J. f. O.* 1891, p. 400; *Kerr, Ibis*, 1892, p. 146 (Lower Pilcomayo); *Aplin, Ibis*, 1894, p. 200 (Uruguay); *Chapm. Bull. Am. Mus. N. H.* 1894, p. 82 (Trinidad).
Dendrocygna virgata, *G. R. Gr. Gen. B.* iii. p. 612, n. 6 (1845); *Sclat. P. Z. S.* 1864, p. 301, 1866, p. 149 (=fulva).
Dafila (*errore*) fulva, *Burm. P. Z. S.* 1872, p. 370.
Dendrocycna fulva, *Sclat. P. Z. S.* 1880, p. 509; *Ridgw. Nom. N. Am. B.* n. 600 (1881); *Rchnw. Vög. d. zool. Gärt.* p. 59 (1882); *B., B., & R. Water-Birds N. Am.* i. p. 484 (1884).

Africa.

Dendrocygna arcuata, *Gr. R. Gr.* (*nec Cuv.*) *List B. Br. Mus.* iii. p. 131 (Lake Tschad) (1844); *Heugl. Syst. Ueb.* n. 687 (1856); *Roch & E. Newt. Ibis*, 1863, p. 175 (Madagascar); *E. Newt. ibid.* p. 460 (Madagascar); *Sclat. P. Z. S.* 1864, p. 300 (part., Int. of Africa); *Heugl. Reise in d. Geb. des Weiss. Nil*, p. 51 (1869).
Dendrocygna arcuata, var. africana, *Bp. Compt. Rend.* xliii. p. 649, n. 53 *e* (1856); *Schleg. Mus. P.-B.*, Anseres, p. 90 (1866); *Grand. Rev. et Mag. de Zool.* 1868, p. 6 (Madagascar).
Dendrocygna major, *Sclat. P. Z. S.* 1864, p. 300 (Madagascar), 1866, pp. 148, 149 (Madagascar); *A. Newt. P. Z. S.* 1865, p. 837 (Madagascar); *Blyth, Ibis*, 1867, p. 175 (Madagascar); *Sclat.*

P. Z. S. 1867, p. 1046 (Madagascar, Zool. Gard.); *Schleg. & Poll. Rech. Faun. Madag.* p. 161 (1868); *Blyth, Ibis*, 1870, p. 176 (=fulva); *Heugl. Orn. N.O.-Afr.* ii. p. 1303 (1873); *Gieb. Thes. Orn.* ii. p. 31 (Madagascar) (1875); *Hartl. Vög. Madag.* p. 359 (1877); *Sibree, Ibis*, 1892, p. 270 (Madagascar).

Dendrocygna africana, *G. R. Gr. Hand-list*, iii. p. 79, n. 10609 (1871); *Heugl. Orn. N.O.-Afr.* ii. p. 1304 (1873); *id. op. cit.* Nachtr. p. cxcix (1871).

Dendrocygna fulva, *Finsch & Hartl. Vög. Ost-Afr.* p. 808 (Senaar; Kordofan) (1870); *Heugl. Orn. N.O.-Afr.* ii. p. 1301 (1873); *id. op. cit.* Nachtr. p. cxcix (1871!); *Sclat. & Salv. P. Z. S.* 1876, p. 372 (part.) (Madagascar); *Hartl. Abh. Brem.* 1882, p. 216 (Lado); *Holub & Pelz. Beitr. Orn. S.-Afr.* p. 328 (1882); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 243 (Shoa) (1884); *Dubois, Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 191 (1886) (Tanganyika); *Rchnw. J. f. O.* 1887, p. 46 (Kagehi); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 320 (Shoa) (1888); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 27 (1894).

Dendrocycna major, *Sclat. P. Z. S.* 1880, p. 510 (East Africa, Madagascar).

Dendrocygna arcuata, var. major, *Milne-Edw. & Grand. Ois. Madag.* p. 731, pl. cclxxii. (bird), cclxxiii., cclxxiv. (osteology), cclxxv. *a.* f. 5 (head) (1882).

India.

Dendrocygna major, *Jerd. Madr. Journ.* xii. p. 218, n. 377 (1840); *id. Ill. Ind. Orn.* pl. 23 (1843); *G. R. Gr. List Spec. B. Br. Mus.* iii. p. 131 (1844); *id. Gen. B.* iii. p. 612, n. 2 (1845); *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 218 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 301, n. 1761 (1849) (Lower Bengal); *Rchnb. Syn. Av.*, Natatores, t. 100. f. 2768 (*ex Jerdon*) (1850); *Jerd. B. of Ind.* iii. p. 790 (syn. emend.) (1864); *Sclat. P. Z. S.* 1864, p. 300 (India); *Blyth, Ibis*, 1865, p. 39 (India), 1866, p. 149 (India); *Schleg. Mus. P.-B.*, Anseres, p. 90 (1866); *Blyth, Ibis*, 1867, p. 175; *Eyt. Syn. Anat.* p. 59 (syn. emend.) (1869); *G. R. Gr. Hand-list*, iii. p. 79, n. 10611 (1871); *Hume, Nests and Eggs*, p. 640 (1873); *Gieb. Thes. Orn.* ii. p. 31 (India) (1875); *Hume, Str. Feath.* iii. p. 193 (Upper Pegu) (1875); *Sclat. & Salv. P. Z. S.* 1876, p. 373; *Wardl. Rams. Ibis*, 1877, p. 472; *Rchnw. Orn. Centralbl.* 1882, p. 22; *Sclat. List Vert. An.* 8th ed. p. 427 (1883).

Dendrocygna arcuata, var. major, *Bp. Compt. Rend.* xliii. p. 649, n. 53 *a* (1856).

Dendrocygna fulva, *Sclat. & Salv. P. Z. S.* 1876, p. 372 (India); *Hume & Davis. Str. Feath.* vi. p. 488 (1878); *Hume, Str. Feath.* vii. p. 463 (1879), viii. p. 115, n. 953 (1879); *Legge, B. of Ceyl.* p. 1069, *Obs.* (1880); *Hume & Marsh. Game Birds*, iii. p. 119, pl. 16 (1880); *Parker, Str. Feath.* ix. p. 487 (1881); *Oates, Str. Feath.* x. p. 245 (1882); *id. B. Br. Burmah*, ii. p. 274 (1883); *Hume, Nests & Eggs (Oates' ed.)*, iii. p. 286 (1890); *Hartert, Kat. Vogelsamml.* p. 228, n. 3386 (Calcutta) (1891).

Dendrocycna major, *Sclat. P. Z. S.* 1880, p. 510 (India); *Rchnw. Vög. d. zool. Gärt.* p. 59 (1882); *Tristr. Cat. Coll. B.* p. 51 (Kurrachee) (1889).

Adult. Head, neck, and lower parts deep reddish ochraceous, passing into cinnamon on the flanks, where the longer feathers have

a broad mesial stripe of pale ochraceous, bordered by dusky; crown ferruginous, nape with a distinct brown-black stripe, commencing at the occiput; middle of the neck whitish, minutely streaked with dusky on the edges of the feathers; prevailing colour above brownish black, the dorsal and scapular feathers broadly edged with cinnamon colour, giving a barred appearance; lesser wing-coverts chestnut; upper and under tail-coverts buffy white; quills and tail dark brown: "bill bluish black, legs bright slaty blue" (*Merrill*); "irides brown" (*White*). Total length 18–20 inches, wing 8·10–8·90, tail 2·2, culmen 1·66–1·95, tarsus 2·10–2·4, middle toe 2·30–2·8.

Female similar.

Young birds have very little chestnut colour on the smaller upper wing-coverts; the underparts paler; the upper tail-coverts narrowly margined with brown.

Young in down. Upper parts greyish brown; lower parts whitish; a white band across the occiput, interrupted by the brown band which runs along the hind-neck; a brown band from the ears to the hind-neck; no white patches on the sides of the back; a whitish band across the wing.

Hab. America (from Southern border of the United States to Mexico), and then from Venezuela and Peru to Argentine Republic; Africa south of the Sahara, and Madagascar; Asia, the greater part of India and Burmah.

a. Ad. st.	No locality (*Massena Coll.*).	E. Wilson, Esq. [P.].
	American specimens.	
b. ♂ ad. sk.	Galveston, Texas, June (*H. E. Dresser*).	Salvin-Godman Coll.
c–h. ♂ ♀ ad. sk.	Corpus Christi, Texas, May, June, Oct. (*F. B. Armstrong*).	Salvin-Godman Coll.
i. Juv. sk.	Nueces Co., Texas, Oct. (*F. B. A.*).	Salvin-Godman Coll.
k–o. ♂ ♀ ad. sk.	Brownsville, Texas, March, April, Nov., Dec. (*F. B. A.*).	Salvin-Godman Coll.
p. Ad. sk.	Washoe Lake, Nevada, winter (*H. G. Parker*).	Salvin-Godman Coll.
q. Juv. sk.	California.	Salvin-Godman Coll.
r. ♀ ad. sk.	San Diego, California, Dec.	Salvin-Godman Coll.
s. ♂ juv. sk.	San Francisco, California (*D. S. Bryant*).	Salvin-Godman Coll.
t. ♂ ad. st.	Mexico.	Purchased.
u. Ad. sk.	Valley of Mexico.	Salvin-Godman Coll.
v. Ad. sk.	Near City of Mexico.	Salvin-Godman Coll.
w, x. Ad. sk.	El Salto, San Luis Potosi, Mexico, July (*W. B. Richardson*).	Salvin-Godman Coll.
y. Pull. st.	Brazil.	Zool. Soc.
z. Ad. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
a'. Ad. sk.	? Upper Paraná.	Salvin-Godman Coll.

b'. ♀ ad. sk.	La Plata, Buenos Ayres, Nov. (*E. W. White*).	Salvin-Godman Coll.
	African specimens.	
c'. ♂ ad. sk.	Landana, Congo (*L. Petit*).	Shelley Coll.
d', *e'*. ♂ ♀ ad. sk.	Palombi R., Shirwa Plains, Aug. (*A. Whyte*).	H. H. Johnston, Esq. [P.].
f'–*k'*. ♂ ♀ ad. sk.	Lake Shirwa, Feb. (*A. Whyte*).	H. H. Johnston, Esq. [P.].
	Indian specimens.	
l'. Ad. sk.	Bengal.	Purchased.
m'. Ad. sk.		India Museum [P.].
n', *o'*. ♂ ♀ ad. sk.	Sindh, Dec., Jan.	Hume Coll.
p'. Juv. sk.	Hydrabad.	India Museum.
q'. ♂ juv. sk.	Bhawulpore, Dec.	Hume Coll.
r'. Juv. sk.	Nepal (*Hodgson*).	India Museum [P.].
s'. ♂ ad. sk.	Calcutta, Nov.	Col. J. Biddulph [C.].
t'–*n''*. ♂ ♀ ad. et imm. sk.	Calcutta, Nov., Dec., Jan., Feb., March (*A. O. H.*).	Hume Coll.
o''. ♂ ad. sk.	Tonghoo, July (*R. G. W. R.*).	Tweeddale Coll.
p'', *q''*. ♂ ♀ ad. sk.	Lower Pegu, July.	E. W. Oates, Esq. [C.].
r''. Skeleton.		

3. Dendrocycna arcuata.

Anas javanica, var. *β*, *Horsf. Trans. Linn. Soc.* xiii. p. 200 (1821) (Java).

Anas arcuata, *Cuv. in Mus. Paris* *; *Horsf. Zool. Res. in Java*, pl. 65 (1822) (Java); *Less. Tr. d'Orn.* p. 634 (1831) (Java); *Finsch, Neu-Guin.* p. 183 (1865) (Port Essington, Amboina, Celebes, Java); *Rosenb. Reist. naar Geelvinkb.* p. 118 (1875).

Dendronessa arcuata, *Wagl. Isis*, 1832, p. 282.

Dendrocygna arcuata, *Sw. Class. B.* ii. p. 365 (1837); ? *Hartl. Verz. Ges. Mus.* p. 118 (1844); *G. R. Gr. Gen. B.* iii. p. 612, n. 1 (1845) (excl. syn.); *Gould, B. Austr.* vii. pl. 14 (1846); *Rchnb. Vög. Neuholl.* p. 521 (1851); ? *Rosenb. N. T. N. I.* xxv. p. 256, n. 301 (1863); *id. J. f. O.* 1864, p. 138, n. 301; *Rams. Ibis*, 1865, p. 87; *Diggl. Orn. Austr.* pl. 114. f. 2 (pt. xxi., 1870); *Legge, B. of Ceyl.* p. 1069 (1880); *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 400, n. 2 (1882); *Blas. J. f. O.* 1884, p. 219 (S.E. Borneo); ? *Hartert, Kat. Vogelsamml.* p. 229 (1891); *Wiglesw. Aves Polynes.* p. 69, n. 346 (1891).

Anas badia, *S. Müll. Verh. Land- en Volkenk.* p. 159 (1839–44) (Moluccas, descr. nulla).

Dendrocygna vagans, *Eyt. MS.*; *G. R. Gr. List Spec. B. Brit. Mus.* iii. p. 131 (1844, Manilla, descr. nulla); *Fraser, Zool. Typ.* pl. 68 (1849) (Manilla); *Rchnb. Syn. Av.*, Natatores, t. cclxxxvii. f. 2361 (*ex Fraser*) (1850); *G. R. Gr. P. Z. S.* 1858, p. 198; *id. Cat. B. New Guin.* p. 63 (1859); *id. Cat. B. Trop. Isl.* p. 54 (Fiji) (1859); *Wall. P. Z. S.* 1863, p. 487 (Timor); *Sclat. P. Z. S.* 1864, p. 300; *Blyth, Ibis*, 1865, pp. 38, 39; *Pelz. Novara Reise, Vögel*, p. 137

* Under the name of *Anas arcuata*, Cuv., there are six specimens in the Paris Museum, two belonging to this species and four to *D. javanica*, all collected by Leschenault; evidently Cuvier, like Horsfield, did not distinguish the two species.

(1865) (Manilla); *Sclat. P. Z. S.* 1866, p. 149; *Schleg. Mus. P.-B.*, Anseres, p. 88 (1866); *Blyth, Ibis*, 1867, p. 175; *Hartl. & Finsch, Fauna Centralpolyn., Orn.* p. 211 (1867); *Rams. P. Z. S.* 1868, p. 388; *Blyth, Ibis*, 1870, p. 176; *G. R. Gr. Hand-list*, iii. p. 79, n. 10610 (1871); *Layard, Ibis*, 1872, p. 99; *Wald. Trans. Zool. Soc.* viii. p. 102 (1872); *Tweedd. Trans. Zool. Soc.* ix. pp. 242, 252 (1875); *Layard, P. Z. S.* 1875, pp. 30, 440 (Viti-levu); *Gieb. Thes. Orn.* ii. p. 31 (1875); *Salvad. Ann. Mus. Civ. Gen.* ix. p. 49 (1876) (Bioto); *Layard, Ibis*, 1876, p. 393; *Brüggem. Abh. naturw. Ver. Brem.* v. p. 98 (1876); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 77, 195, 217, 386 (1876), ii. p. 200, n. 654 (1877); *D'Alb. Sydn. Mail*, 1877, p. 248; *id. Am. Mus. Civ. Gen.* x. pp. 19, 20 (1877); *id. Ibis*, 1877, p. 372; *Sharpe, Journ. Linn. Soc.* xiii. p. 505 (1877); *Tweedd. P. Z. S.* 1877, pp. 769, 834, 1878, pp. 602, 712, 954; *Hume, Str. Feath.* vi. p. 488 (note) (1878); *Rams. Pr. Linn. Soc. N. S. W.* iii. p. 301 (1878), iv. p. 102, n. 211 (1879); *Rosenb. Malay. Archip.* pp. 279 (Goram), 373 (Aru, Ké), 564 (New Guinea) (1878–79); *D'Alb. & Salvad. Ann. Mus. Civ. Gen.* xiv. p. 134 (1879) (Fly River); *Meyer, Ibis*, 1879, p. 144 (Celebes); *D'Alb. Nuova Guin.* pp. 585, 588 (1880); *Legge, B. Ceyl.* p. 1069 (observ.) (1880); *Tweedd. Orn. Works*, pp. 201, 404, 543, 561, 602, 625, 645 (1881); *Wardl. Rams. ibid.* p. 660 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 23; *Salv. Cat. B. Strickl. Coll.* p. 531, n. 2586 (1882); *Blas. J. f. O.* 1883, p. 133 (Celebes); *Vorderm. N. T. N. I.* xliii. p. 133 (Java) (1883), xlvi. pp. 222, 240, n. 452 (Bandjermassin) (1887), xlix. p. 419 (Sumatra?) (1889); *Rams. Tab. List*, p. 22, n. 665 (1888); *? Everett, Journ. Str. Br. R. As. Soc.* 1889, p. 192 (1889); *North, Cat. Nests & Eggs Austr.* p. 339 (1889); *Wiglesw. Aves Polyn.* p. 69 (1891).

Dendrocygna arcuata (australis), *Rchnb. Syn. Av.*, Natatores, t. 91. ff. 2650–51 (1850) (*ex Gould*).

Dendrocygna arcuata, var. gouldi, *Bp. Compt. Rend.* xliii. p. 649, n. 53 *c* (1856).

Dendrocygna arcuata, var. vagans, *Bp. ibid.* n. 53 *d* (1856).

Dendrocygna badia, *G. R. Gr. P. Z. S.* 1860, p. 366 (Moluccas).

Dendrocygna gouldi, *Gould, Handb. B. Austr.* ii. p. 374 (1865); *Marie, Act. Soc. Linn. Bord.* xxvii. p. 328 (1870); *id. Ibis*, 1877, p. 363, n. 105 (New Caledonia); *Rams. P. Z. S.* 1877, p. 346; *Layard, Ibis*, 1882, pp. 538, 542, 544.

Anas, sp., *Jouan, Mém. Soc. Sc. Nat. Cherb.* ix. p. 242 (1863) (N. Caledonia).

Dendrocygna javanica, *Jerd.* (*nec Horsf.*) *B. of Ind.* iii. p. 789 (1864).

Anas vagans, *Finsch, Neu-Guin.* p. 183 (1865).

Anas (Dendrocygna) vagans, *Mart. J. f. O.* 1866, p. 30, n. 190.

Dendronessa arcuata, *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872).

Dendrocycna vagans, *Sclat. P. Z. S.* 1880, p. 510; *Tristr. Cat. Coll. B.* p. 51 (N. Australia) (1889).

Dendrocycna arcuata, *Salvad. Orn. Pap. e Mol.* iii. p. 385 (1882); *id. Agg.* p. 210 (1891); *Meyer, J. f. O.* 1892, p. 265 (Kaiser-Wilhelm's-Land).

Dendrocygna arcuata vagans, *Stejn. Pr. U.S. Nat. Mus.* x. p. 398 (1887).

Adult. Upper part of the head and a line down the back of the neck brown-black; sides of head and neck pale fulvous; throat

almost white; back and scapulars black, with the edges bright rufous-chestnut, on the upper back the black part of the feathers with rufous spots or bars; rump black; median upper tail-coverts black, the lateral ones buffy white, more or less spotted with black; breast pale rufous, each feather with black dots or crescent-like spots in the middle, and shading into the bright rufous-chestnut of the abdomen; lower abdomen and the under tail-coverts whitish buff, the latter uniform, but the abdomen with brown spots; the feathers of the flanks with broad mesial buffy white streaks, edged with black; lesser and median wing-coverts bright chestnut, the greater ones, quills, and tail black: irides brown; bill blackish or dark ashy; tarsi and feet dark ashy. Total length about 17 inches, wing 8·5, tail 2·8, culmen 1·7, tarsus 1·85.

Female similar.

Hab. Philippines, Celebes, Borneo, Java, Timor, Sumba, Moluccas, New Guinea, Australia, New Caledonia, and Fiji Islands.

a, *b*. Ad. st.	Manilla, Philippine Is.	Cuming Coll. (Type of *Dendrocygna vagans*, Eyton.)
c. ♀ juv. sk.	Catbalogan, Samar, April.	E. L. Moseley, Esq. [C.].
d, *e*. ♂ ad. et juv. sk.	Cebu, March, April (*A. E. Everetti*).	Tweeddale Coll.
f. ♂ ad. sk.	S. Leyte, Sept. (*A. E. E.*).	Tweeddale Coll.
g. *h*. ♂ ♀ ad. sk.	Amparo, July (*A. E. E.*).	Tweeddale Coll.
i, *k*, *l*. ♀ ad. et ♂ ♀ juv. sk.	N. Bohol, Oct., Nov. (*A. E. E.*).	Tweeddale Coll.
m, *n*. ♂ ad. et ♀ juv. sk.	Siquijor, Feb.	E. L. Moseley, Esq. [C.].
o. ♀ ad. sk.	Zamboanga, April (*A. E. E.*).	Tweeddale Coll.
p. Ad. sk.	N. Mindanao (*A. E. E.*).	Tweeddale Coll.
q. ♂ ad. sk.	Malimaui, Nov.	E. L. Moseley, Esq. [C.].
r, *s*. ♂ ad. sk.	Menado, N. Celebes.	Tweeddale Coll.
t, *u*. ♂ ad. sk.	Makassar.	A. R. Wallace, Esq. [P.].
v. ♂ ad. sk.	Makassar (*A. R. Wallace*).	H. J. Elwes, Esq. [P.].
w. Ad. sk.	Java (*Horsfield*). (Type of Horsfield's plate, Zool. Res. pl. 65.)	India Museum [P.].
x. Ad. sk.	Java (*Horsfield*). (One of the types of *Anas javanica*, var. *β*, Horsf.)	India Museum [P.].
y. Ad. sk.	E. Timor (*A. R. W.*).	Tweeddale Coll.
z. ♀ ad. sk.	E. Timor.	A. R. Wallace, Esq. [P.].
a', *b'*, *c'*. Ad. et juv. sk.	Australia.	Salvin-Godman Coll.
d', *e'*. Ad. sk.	Lawrence R., Australia (*Irving*).	Salvin-Godman Coll.
f', *g'*. ♀ ad. sk. et ad. st.	Port Essington.	J. B. Jukes, Esq. [P.].
h'. Ad. sk.	New Caledonia.	Tweeddale Coll.
i', *k'*. Ad. sk.	Viti Levu, Fiji Is., Sept. (*J. D. Macdonald*).	Voyage of H.M.S. 'Alert.'
l'. Ad. sk.	Kandi, Fiji Is. (*E. L. Layard*).	Seebohm Coll.

4. Dendrocycna javanica.

Anas javanica, *Horsf. Tr. Linn. Soc.* xiii. p. 199 (Java) (1821).

Anas arcuata, part., *Horsf. Zool. Res. in Java*, text of pl. 65 (1822); *Sykes* (*nec Cuv.*), *P. Z. S.* 1831, p. 125.

Anas sp., *Raffl. Tr. Linn. Soc.* xiii. p. 331 (Sumatra) (1822).

Mareca awsuree, *Sykes, P. Z. S.* 1832, p. 168 (Dukhun); *Less. Compl. de Buff., Ois.* ix. p. 534 (1837); *id. op. cit.* 2nd ed. p. 721 (1838).

Dendrocygna arcuata, *Sw.* (*nec Cuv.*) *Class. B.* ii. p. 365 (Java) (1837); *Eyt. Mon. Anat.* p. 108 (1838); *Hodgs. in Gray's Zool. Misc.* p. 86, n. 581 (1844); *G. R. Gr. List Spec. B. Brit. Mus.* iii. p. 131 (1844); *id. Gen. B.* iii. p. 612, n. 1 (syn. emend.) (1845); *id. Cat. Spec. Hodgs. Coll. B. M.* p. 144 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 301, n. 1762 (1849); *Kelaart, Prodr. Cat.* p. 136 (1852) (Ceylon); ? *Licht. Nomencl. Av.* p. 102 (Bengala, Java) (1854); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (1854); *G. R. Gr. Cat. Spec. Hodgs. Coll. B. M.* 2nd ed. p. 76 (1863); *Sclat. P. Z. S.* 1863, p. 224 (Banjermassing), 1864, p. 300 (part.); *Blyth, Ibis*, 1865, p. 39; *Pelz. Reise Novara, Vögel*, p. 137 (Java) (1865); *Schleg. Mus. P.-B.*, Anseres, p. 89 (1866); *Blyth, Ibis*, 1867, p. 175; *Eyt. Suppl. Osteol. Av.* pl. — (1862); *id. Syn. Anat.* p. 60 (1869); *G. R. Gr. Hand-list*, iii. p. 79, n. 10608 (1871); *Hume, Str. Feath.* i. p. 260 (Sindh) (1872–73); *Anders. Ibis*, 1874, p. 222; *Hume, Nests and Eggs*, p. 639 (1873–74); *Salvad. Ucc. Born.* p. 362 (part.) (1874); *Hume, Str. Feath.* ii. p. 315 (Nicobars) (1874); *Ball, ibid.* p. 437 (1874); *Hume, ibid.* p. 483 (Tenasserim) (1874); *Blyth, B. Burm.* p. 165 (1875); *Gieb. Thes. Orn.* ii. p. 30 (part.) (1875); *Wardl. Rams. Ibis*, 1877, p. 472; *Oates, Str. Feath.* v. p. 169 (1872); *Rchnw. Orn. Centralbl.* 1882, p. 22; *Salv. Cat. B. Strickl. Coll.* p. 531, n. 2585 (1882); *Vorderm. N. T. N. I.* xliii. p. 194 (Java) (1883); ? *Blas. J. f. O.* 1884, p. 219 (Bangkau Lake); *Grabowsky, Ornis*, 1885, p. 163 (Bangkau, S.E. Borneo); *A. Müll. J. f. O.* 1885, p. 162 (Salanga); *Vorderm. N. T. N. I.* xlvi. p. 240, n. 451 (1886), xlix. p. 419, n. 481 (1899); *Tristr. Cat. Coll. B.* p. 50 (1889).

Dendrocygna awsuree, *Jerd. Madr. Journ.* xii. p. 218, n. 376 (1840); *id. B. of Ind.* iii. p. 786 (1864); *Simson, Ibis*, 1882, p. 93 (E. Bengal).

Anas caryophyllacea, *Sundev.* (*nec Lath.*) *Physiog. Sällsk. Tidskr.* i. p. 210 (1837); *id. Isis*, 1842, p. 795; *id. Ann. & Mag. N. H.* xix. p. 172 (1847).

Anas castanea, *Mus. Holm. fide Sundev. ll. cc.*

Dendrocygna javanica, *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 171–72 (1845); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Legge, Ibis*, 1874, p. 27 (Ceylon), 1875, p. 407; *Hume & Davis. Str. Feath.* vi. pp. 486, 488 (note) (Tenasserim) (1870); *Cripps, Str. Feath.* vii. p. 311; *Hume, Str. Feath.* viii. p. 71 (Malacca), p. 114, n. 952 (1879); *Tiraut, Bull. Com. Agr. et Industr. Cochinch.* i. p. 161 (1879); *Legge, B. Ceyl.* p. 1069 (1880); *Hume & Marsh. Game Birds*, iii. p. 109, pl. 15 (1880); *Bingh. Str. Feath.* ix. p. 198 (1882); *Park. ibid.* p. 486 (Ceylon) (1881); *Oates, Str. Feath.* x. p. 245 (1882); *Kelham, Ibis*, 1882, p. 197 (Malay Peninsula); *Oates, B. Br. Burmah*, ii. p. 273 (1883); *Sclat. List Vert. An.* 8th ed. p. 426 (1883); *Parker, Ibis*, 1883, pp. 194, 195 (breeding, Ceylon); *C. Swinh. & Barn. Ibis*, 1885, p. 131; *Parker, Ibis*, 1886,

p. 188 (Ceylon); *Seebh. Ibis*, 1887, p. 181 (Loo-choo Isl.); *Stejn. Pr. U.S. Nat. Mus.* x. p. 397 (Loo-choo I.) (1887); *id. Zeitschr. ges. Orn.* 1887, p. 169; *Styan, Ibis*, 1889, p. 446 (Shanghai); *Everett, Journ. Str. Br. R. As. Soc.* 1889, p. 192; *Hume, Nests & Eggs* (*Oates' ed.*), iii. p. 284 (1890); *Seebh. Birds Jap. Emp.* p. 240 (1890); *Hartert, Kat. Vogelsamml.* p. 229 (1891); *Sharpe Cat. Osteol. Specim. Coll. Surg.* iii. p. 297 (1891); *Rickett, Ibis*, 1894, p. 225 (China).

Dendrocygna arcuata, var. minor, *Bp. Compt. Rend.* xliii. p. 649, n. 53*b* (1856).

Dendrocycna arcuata, part., *Sclat. P. Z. S.* 1880, p. 510 (India); *Rchnw. Vög. der zool. Gärt.* p. 59 (1882).

Dendrocycna javanica, *Salvad. Orn. Pap. e Mol.* iii. p. 388 (1882); *Gigl. Avif. Ital.* p. 301 (1886); *Salvad. El. Ucc. Ital.* p. 256 (1887); *id. Ann. Mus. Civ. Gen.* (2) iv. p. 616 (Burmah) (1887); *Gigl. Icon. Avif. Ital.* pt.xxxiv. pl. 346 (1887); *Gigl. Primo Resoc. Avif. Ital.* pt. 1, p. 465 (1889), pt. 2, p. 26 (1890).

Adult. Forehead, crown, and occiput brown, more rufous on the forehead; sides of the head and neck pale greyish fulvous, darker on the hind-neck; chin and throat whitish; back and scapulars dark brown, each feather broadly edged with rufous; rump black; upper tail-coverts chestnut; breast yellowish ochreous, shading gradually into the light chestnut of the lower plumage; feathers of the flanks fulvous-brown, with white-fulvous streaks along the middle; axillaries brown-black; under tail-coverts whitish fulvous; lesser and median upper wing-coverts chestnut, greater coverts and quills ashy black, the quills darker; tail brown: "bill, legs, and feet brownish blue, the nail of the bill nearly black; iris brown; eyelids bright yellow; claws bluish horn-colour" (*Oates*). Total length about 16 inches, wing 7·5, tail 2·3, culmen 1·9, tarsus 1·7.

Female. Similar.

Hab. India, Ceylon, Indo-Burmese countries, Siam, Cochinchina, China, Loo-choo Islands, Malay Peninsula, Sumatra, Borneo, and Java *.

a. Juv. st.	India (*Blyth*).	India Museum [P.].
b. Ad. sk.	India.	Purchased.
c. ♀ ad. sk.	E. Narra, Sindh, July (*E. A. Butler*).	Hume Coll.
d. Ad. sk.	Godra, Pauch Mehals, Sept.	Hume Coll.
e. ♀ ad. sk.	Jhansee, Sept.	Hume Coll.
f, *g*, *h*. Ad. et juv. sk.	Etawah, Aug.	Hume Coll.
i–*n*. Ad. et juv. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
o. Imm. sk.	Oudh, Dec.	Hume Coll.
p, *q*, *r*. ♂ ad. et ad. sk.	Saugor, Central Provinces, Aug. to Dec.	Hume Coll.

* The last specimen in the list below, by mistake and with a query, is labelled as from the interior of Africa (*Major Denham*). It is important to notice that the only species of *Dendrocycna* recorded as met with during the journey of Denham and Clapperton is *D. viduata*.

s, *t*, *u*. Ad. sk. et st.	Nepal.	B. H. Hodgson, Esq. [P.].
v–*y*. Ad. sk.	Nepal (*B. H. Hodgson*).	India Museum [P.].
z. Ad. sk.	Darjeeling.	India Museum [P.].
a'. Imm. sk.	Bhotan Terai, Jan. (*L. Mandelli*).	Hume Coll.
b'. Juv. sk.	Bhotan Doars, Jan. (*L. M.*).	Hume Coll.
c'. Ad. sk.	Assam.	Tweeddale Coll.
d', *e'*. ♂ ♀ ad. sk.	Dollah, Assam, May (*J. Cockburn*).	Hume Coll.
f', *g'*. ♂ ♀ juv. sk.	Dipur Bheel, Assam, Nov. (*A. W. Chennell*).	Tweeddale Coll.
h'–*l'*. ♂ ad. et ad. sk.	Suddya, Assam, March, April (*J. C.*).	Hume Coll.
m'. Ad. sk.	Dilkoushah, Cachar (*J. Inglis*).	Hume Coll.
n'. Ad. sk.	Bengal (*Falconer*).	India Museum [P.].
o'. ♂ ad. sk.	Sambalpur, April.	Hume Coll.
p'. ♀ ad. sk.	Maunbhoom, Feb. (*R. C. Beavan*).	H. J. Elwes, Esq. [P.].
q'. ♂ ad. sk.	Calcutta, Feb.	Col. J. Biddulph, [C.].
r'. ♂ ad. sk.	Calcutta, Jan. (*J. Anderson*).	H. J. Elwes, Esq. [P.].
s'. ♂ ad. sk.	Calcutta, Feb. (*J. Biddulph*).	Tweeddale Coll.
t'. Ad. sk.	Vizagapatam, Madras Presidency (*Major Wynch*).	Tweeddale Coll.
u'. Ad. sk.	Dacca.	Hume Coll.
v'. Ad. sk.	Deccan (*Sykes*). (Type of *Mareca awsuree*, Sykes.)	India Museum [P.].
w'–*z'*. Ad. sk. et st.	Deccan (*Sykes*).	India Museum [P.].
a''. Ad. sk.	Ceylon.	Dr. J. Kelaart [C.].
b''. ♀ ad. sk.	Giant's Tank, Ceylon, Feb. (*H. Parker*).	Hume Coll.
c''. ? ♀ ad. sk.	Bentottee, Ceylon, Sept. (*W. V. Legge*).	R. Bowdler Sharpe, Esq. [P.].
d'', *e''*. ♂ ♀ ad. sk.	Lower Pegu, Aug.	E. W. Oates, Esq. [C.].
f'', *g''*. ♂ ad. sk.	Tonghoo, Feb., June (*R. G. W. R.*).	Tweeddale Coll.
h''. ♂ imm. sk.	Kyouk-kyee, Brit. Burmah (*R. G. W. R.*).	Tweeddale Coll.
i', *k''*. Ad. sk.	Tenasserim.	Tweeddale Coll.
l''. ♀ ad. sk.	Thamban, Thatone, Jan.	Hume Coll.
m'', *n''*. Ad. sk.	Thatone, July.	Hume Coll.
o'', *p''*. ♂ ad. et juv. sk.	Amherst, July, Dec. (*W. Davison*).	Hume Coll.
q'', *r''*. ♂ ♀ ad. sk.	Yea, Tenasserim, March (*W. D.*).	Hume Coll.
s''. ♂ juv. sk.	Near Yeaboo, Dec. (*J. Darling*).	Hume Coll.
t''. ♂ ad. sk.	Tavoy R., April (*W. D.*).	Hume Coll.
u''–*x''*. ♂ ♀ ad. sk.	Bangkok, Siam, April (*Capt. Conrad*).	R. Bowdler Sharpe, Esq. [P.].
y'', *z''*. Ad. sk.	Cochin China, Nov.	M. St. Pierre [P.].

a^3, b^3, c^3. Ad. et juv. sk.	Loo-choo Is., Aug. (*H. Pryer*).	Seebohm Coll.
d^3, e^3, f^3. ♂ ♀ ad. sk.	Kossoom, April, May (*J. Darling*).	Hume Coll.
g^3, h^3. ♂ ♀ ad. sk.	Port Blair, S. Andamans, May (*R. J. Wimberley*).	Hume Coll.
i^3–m^3. ♂ ♀ ad. sk.	Trinkut Is., Nicobars, Feb., March (*W. D.*).	Hume Coll.
n^3, o^3. ♂ ad. et juv. sk.	Trinkut Is., Jan. (*R. J. W.*).	Tweeddale Coll.
p^3. Ad. sk.	Prov. Wellesley (*Dr. Cantor*).	India Museum [P.].
q^3–t^3. Ad. sk.	Pinang (*Dr. Cantor*).	India Museum [P.].
u^3. Ad. sk.	Pahang.	Capt. H. J. Kelsall [P.].
v^3. Ad. sk.	Malacca (*Dr. Maingay*).	Tweeddale Coll.
w^3. Ad. sk.	Sumatra.	A. R. Wallace, Esq. [C.].
x^3. Ad. sk.	Sumatra (*Carl Bock*).	Tweeddale Coll.
y^3. Ad. sk.	Java (*Horsfield*).	India Museum [P.]. (Type of the species.)
z^3. Ad. st.	Java (? *Horsfield*).	India Museum [P.].
a^4. ♀ ad. sk.	Java (*Diard*).	Salvin-Godman Coll.
b^4. Ad. st.	[Interior of Africa.]	[Major Denham [P.].]

5. Dendrocycna autumnalis.

Red-billed Whistling Duck, *Edw. Birds*, iv. pl. 194 (West Indies) (1743); *Lath. Syn.* iii. 2, p. 498, n. 47 (1785); *id. Suppl.* i. p. 274 (1787).

Anas fistularis americana, *Briss. Orn.* vi. p. 400, pl. 38 (1760) (Amérique septentrionale).

Anas autumnalis, *Linn. S. N.* i. p. 205, n. 39 (1766); *Gm. S. N.* i. 2, p. 537, n. 39 (part.) (1788); *Lath. Ind. Orn.* ii. p. 852, n. 52 (part.) (1790); *Bonn. Enc. Méth.* i. p. 140 (part.) (1790); *Vieill. N. D.* v. p. 153 (part.) (1816) (Cayenne); *Dum. Dict. Sc. Nat.* vi. p. 369 (part.) (1817); *Steph. Gen. Zool.* xii. 2, p. 99 (part.) (1824).

Sifflеur à bec rouge et narines jaunes, part., *Buff. Hist. Nat. Ois.* ix. p. 183 (1783).

Dendronessa autumnalis, *Wagl. Isis*, 1832, p. 282.

Dendrocygna autumnalis, *Eyt. Mon. Anat.* p. 109 (1838); *G. R. Gr. Gen. B.* iii. p. 612, n. 3 (part.) (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. f. 175 (1845); *Gosse, B. Jam.* p. 398 (1847); *Lawr. Ann. Lyc. N. Y.* 1851, p. 117; *Stansb. Rep.* p. 334 (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 57 (1856); *Sclat. P. Z. S.* 1858, p. 360 (Honduras); *Baird, B. N. Am.* p. 770, pl. 63. f. 2 (Texas) (1858); *id. Cat. N. Am. B.* n. 574 (1859); *id. Mex. B. Surv.* ii. 2, p. 26, pl. 25 (Texas) (1859); *Sclat. & Salv. Ibis*, 1859, p. 231; *Tayl. Ibis*, 1860, p. 315; *Cass. Pr. Ac. Philad.* 1860, p. 197 (R. Truando); *Albrecht, J. f. O.* 1862, p. 266 (Jamaica); *March, Pr. Ac. Philad.* 1864, p. 70; *Tayl. Ibis*, 1864, p. 172 (Porto Rico); *Sclat. P. Z. S.* 1864, p. 299 (part.); *Sclat. & Salv. ibid.* p. 372 (Panama); *Salv. Ibis*, 1865, p. 193 (Guatemala); *Lawr. Ann. Lyc. N. Y.* vii. p. 13 (Panama) (1865); *Dress. Ibis*, 1866, p. 42 (Texas); *Lawr. Ann. Lyc. N. Y.* viii. p. 63 (Panama) (1866), ix. p. 143 (Costa Rica) (1863); *Eyt. Syn. Anat.* p. 61 (part.) (1869); *Frantz. J. f. O.* 1869, p. 379 (Costa Rica); *Pelz. Orn. Bras.* p. 459 (1870);

G. R. Gr. Hand-list, iii. p. 79, n. 10615 (part.) (1871); *Gieb. Thes. Orn.* ii. p. 31 (1875); *Coues, Key*, p. 284 (1872); *id. Check-list*, n. 487 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129, n. 2 (1873); *Coues, B. N.-West*, p. 558 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 313 (Mazatlan) (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 375; *Merrill, Pr. U.S. Nat. Mus.* i. p. 169 (1879); *A. & E. Newt. Handb. Jam.* p. 112 (1881); *Salv. Cat. B. Strickl. Coll.* p. 530 (1882); *Coues, Check-list*, 2nd ed. p. 112, n. 706 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 62; *Sclat. List Vert. An.* 8th ed. p. 426 (part.) (1883); *Coues, Key N. Am. B.* 2nd ed. p. 689, n. 706 (1884); *Cory, List B. W. Ind.* p. 30 (1885); *A. O. U. Code of Nom. and Check-list*, p. 129, n. 177 (1886); *Lloyd, Auk*, 1887, p. 185 (W. Texas); *Ridgw. Man. N. Am. B.* p. 119, n. 177 (1887); *Cory, Auk*, 1888, p. 60 (Jamaica); *id. B. W. Ind.* p. 261 (1889); *Salv. Ibis*, 1889, p. 377, 1890, p. 89 (Cozumel I.); *Richm. Pr. U.S. Nat. Mus.* xvi. p. 531 (Rio Frio) (1893).

Dendrocycna autumnalis, *Sclat. P. Z. S.* 1880, p. 509; *Ridgw. Nom. N. Am. B.* n. 599 (1881); *Rchnw. Vög. d. zool. Gärt.* p. 59 (1882); *B., B., & R. Water-Birds N. Am.* i. p. 481 (1884).

Adult. Pileum cinnamon-brown, pale in front, on the occiput passing into black, which is continued in a narrow stripe down the nape; sides of the head and upper part of the neck pale ochreous ashy; remainder of the neck, back, scapulars, jugulum, and breast cinnamon-brown, the dorsal region more rusty; rump, upper tail-coverts, abdomen, flanks, and under wing-coverts deep black, abruptly defined against the cinnamon of the breast; crissum white, spotted with black; lesser wing-coverts ochreous olive, middle coverts ash-colour, the greater and primary-coverts greyish white, the lower feathers of the latter dusky; quills and tail deep black, but the quills pure white basally: "iris brown; bill coral-red, orange above, nail of bill bluish; legs and feet pinkish white" (*Merrill*). Total length about 19 inches, wing 9·20–9·70, tail 3, culmen 1·90–2·15, tarsus 2·25–2·60, middle toe 2·30–2·70.

Female. Similar to the male.

Young. Much like the adult, but pattern of coloration much less distinct and colour duller; the reddish brown replaced by dingy greyish tinged with rusty; the belly and flanks greyish white, with dusky cross-bars; bill and feet dusky.

Downy young. Above blackish brown, varied by large, sharply-defined patches of sulphury buff—two on the sides of the back and two on the sides of the rump; a sharply-defined superciliary stripe and a band across the cheeks encircling the occiput saffrony buff; a blackish-brown band from the cheeks to the nape; lower parts pale buffy yellow, the belly whitish.

Hab. Central America, from Rio Grande Valley in Texas to Panama.

a–i. ♂ ♀ ad. sk.	Brownsville, Texas, April, May (*F. B. Armstrong*).	Salvin-Godman Coll.
k, l, m. ♂ ♀ ad. sk.	Hidalgo, Texas, April (*F. B. A.*).	Salvin-Godman Coll.
n. Ad. sk.	Tamaulipas, Mexico (*W. B. Richardson*).	Salvin-Godman Coll.

o. ♀ ad. sk.	Altamira, Tamaulipas, May (*W. B. R.*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Tampico, Mexico, June (*W. B. R.*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Xalapa, Mexico, Nov. (*Ferrari-Perez*).	Salvin-Godman Coll.
r, s. ♂ ♀ juv. sk.	Vega del Casadero, Vera Cruz, Dec. (*M. Trujillo*).	Salvin-Godman Coll.
t. Ad. sk.	Mazatlan, W. Mexico (*A. J. Grayson*).	Salvin-Godman Coll.
u, v. ♂ ad. et ♀ imm. sk.	Presidio, W. Mexico, Jan., Feb. (*A. Forrer*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Huamuchal, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
x–b'. Ad. sk.	Cozumel I., Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
c'. Ad. sk.	Nicoya, Costa Rica, March (*E. Arcé*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Lion Hill, Panama (*McLeannan*).	Salvin-Godman Coll.
e'. Pull. sk.	Aqua dulce, Panama.	Salvin-Godman Coll.
f'. Skeleton.	Mexico.	

6. Dendrocycna discolor.

Canard siffleur de Cayenne, *D'Aubent. Pl. Enl.* 826.

Siffleur à bec rouge et narines jaunes, part., *Buff. Hist. Nat. Ois.* ix. p. 183 (1783).

Anas autumnalis, *Jacquin* (*nec Linn.*), *Beytr.* i. p. 6, n. 4 (New Grenada) (1784); *Gm. S. N.* i. 2, p. 537, n. 39 (part.) (1788); *Lath. Ind. Orn.* ii. p. 852, n. 52 (part.) (1790); *Bonn. Enc. Méth.* i. p. 140 (part.) (1790); *Vieill. N. D.* v. p. 153 (Cayenne, Nouvelle Grenade) (1816); *Dum. Dict. Sc. Nat.* vi. p. 369 (part.) (1817); *Licht. Verz. Doubl.* p. 84 (Brazil) (1823); *Steph. Gen. Zool.* xii. 2, p. 99 (part.) (1824); *Less.* (*nec Linn.*) *Tr. d'Orn.* p. 634, n. 68 (Cayenne) (1831); *Burm. Syst. Ueb. Thiere Bras. Vög.* ii. p. 436 (part.) (1856); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (Venezuela) (1887).

Dendrocygna autumnalis, *G. R. Gr.* (*nec Linn.*) *List Spec. B. Br. Mus.* iii. p. 131 (S. Amer., Guiana) (1844); *Cab. in Schomb. Guian. Reis.* iii. p. 762 (1848); ? *Licht. Nomencl. Av.* p. 102 (1854); *Sclat. P. Z. S.* 1864, p. 299 (part.); *Sclat. & Salv. P. Z. S.* 1866, p. 200 (Ucayali); *Léotaud, Ois. Trin.* p. 507 (Trinidad) (1866); *Schleg. Mus. P.-B.*, Anseres, p. 2 * (1866); *Eyt. Syn. Anat.* p. 61 (part.) (1869); *Pelz. Orn. Bras.* pp. 320, 459, lviii (1870); *Finsch P. Z. S.* 1870, p. 589 (Trinidad); *G. R. Gr. Hand-list*, iii. p. 79, n. 10615 (part.) (1871); *Gieb. Thes. Orn.* ii. p. 31 (part.) (1875); *Sclat. List Vert. An.* 8th ed. p. 426 (part.) (1883); *Tristr.* (*nec Linn.*) *Cat. Coll. B.* p. 50 (Para) (1889); *Hartert, Kat. Vogelsamml.* p. 228, n. 3383 (S. America) (1891).

Dendrocygna discolor, *Sclat. & Salv. Nomencl. Av. Neotrop.* pp. 129, 161 (1873); *iid. P. Z. S.* 1876, p. 375; *Sclat. P. Z. S.* 1880, p. 506; *Rchnw. Orn. Centralbl.* 1882, p. 23; *Salv. Cat. B. Strickl. Coll.* p. 530 (1882); *B., B., & R. Water-Birds N. A.* i. p. 482 (1884);

* Schlegel mentions the skeleton of a specimen from Buenos Ayres.

Salv. Ibis, 1886, p. 172; *Tacz. Orn. Pér.* iii. p. 469 (1886); *Ridgw. Man. N. Am. B.* p. 119 (1887); *Chapm. Bull. Mus. N. H.* 1894, p. 82 (Trinidad).

Dendrocygna autumnalis discolor, *B., B., & R. Water-Birds N. A.* i. p. 480 (1884).

Similar to *D. autumnalis*, but differs in the lower hind-neck being fulvous-grey, strongly and abruptly contrasted against the dark chestnut-brown of the back; also the breast is greyish, instead of chestnut as in *D. autumnalis*. Wing 9·10–9·30 inches, culmen 1·80–1·90, tarsus 2·20–2·25.

Hab. Colombia, Guiana, with Trinidad Island, Ecuador, Eastern Peru, and Brazil.

a. Ad. st.	S. America.	
b, c. Ad. et juv. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.
d, e. Ad. st.	British Guiana.	Sir R. Schomburgk [P.].
f, g. ♂ ♀ ad. sk.	R. Rupurumi, British Guiana, May (*H. Whitely*).	Salvin-Godman Coll.
h. Ad. sk.	Maroni River, Surinam (*Kappler*).	Salvin-Godman Coll. (Type of the species.)
i. ♀ ad. sk.	Upper Ucayali, May (*E. Bartlett*).	H. J. Elwes, Esq. [P.].
k. ♀ ad. sk.	Rio Paraná, Brazil, April (*Natterer*).	Salvin-Godman Coll.

7. Dendrocycna arborea.

Whistling Duck, *Sloane, Jam.* ii. p. 324, t. 272 (1726).

Black-billed Whistling Duck, *Edw. Glean.* pl. 193 (1743) (West Indies); *Lath. Syn.* iii. 2, p. 499, n. 48 (1785).

Anas fistularis jamaicensis, *Briss. Orn.* vi. p. 403 (1760).

Anas arborea, *Linn. S. N.* i. p. 207, n. 44 (1766); *Gm. S. N.* i. 2, p. 540, n. 44 (1788); *Lath. Ind. Orn.* ii. p. 852, n. 53 (1790); *Bonn. Enc. Méth.* i. p. 141, n. 42 (1790); *Vieill. N. D.* v. p. 152 (1816); *Dum. Dict. Sc. Nat.* vi. p. 368 (1817); *Steph. Gen. Zool.* xii. 2, p. 98 (1824); *Less. Tr. d'Orn.* p. 633 (1831); *D'Orb. in La Sagra's Hist. Nat. Cuba*, i. p. 291 (1840); *Burm. Thiere Bras.* iii. p. 436 (1856); *Thienem. J. f. O.* 1857, p. 157 (egg); *Sundev. Œfv. K. Vet.-Akad. Forh.* 1869, p. 603.

Canard siffleur de la Jamaïque, *D'Aubent. Pl. Enl.* 804.

Siffleur à bec noir, *Buff. Hist. Nat. Ois.* ix. p. 185 (1783).

? Succé, *Jacquin, Beytr.* i. p. 5, n. 3 (1784) (S. Domingo).

? Anas jacquini, *Gm. S. N.* i. p. 536, n. 108 (1788); *Lath. Ind. Orn.* ii. p. 863, n. 80 (1790); *Vieill. N. D.* v. p. 158 (1816); *Dum. Dict. Sc. Nat.* vi. p. 385 (1817).

? Anas succé, *Bonn. Enc. Méth.* i. p. 134, n. 29 (1790) (*ex Jacquin*; San Domingo).

Dendronessa arborea, *Wagl. Isis*, 1832, p. 282.

Dendrocygna arborea, *Sw. Class. B.* ii. p. 365 (1837); *Eyt. Mon. Anat.* p. 110 (1838); *G. R. Gr. List Spec. B. Br. Mus.* iii. p. 131 (Jamaica) (1844); *id. Gen. B.* p. 612, n. 4 (1845); *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 219 (1846); *Gosse, B. Jam.* p. 395

(1847); *Rchnb. Syn. Av., Novitiæ*, Natatores, t. 107. f. 2359 (*ex Edw.*) (1850); *id. Av. Syst. Nat.* p. x (1852); *Baird, Stansb. Rep.* p. 334 (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 56 (1856); *Cab. J. f. O.* 1857, p. 227; *A. & E. Newt. Ibis*, 1859, p. 366 (St. Croix, with fig. of the trachea); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *Albr. J. f. O.* 1862, p. 206; *Sclat. P. Z. S.* 1864, p. 300 (Jamaica); *March, Pr. Ac. Philad.* 1864, p. 70; *Bryant, Pr. Bost. Soc. N. H.* xi. p. 73 (Inagua) (1866); *Schleg. Mus. P.-B.*, Anseres, p. 84 (1866); *Gundl. Rep. Fis.-Nat. Cuba*, i. p. 387 (1866); *Eyt. Syn. Anat.* p. 62 (1869); *Pelz. Orn. Bras.* p. 459 (1870); *G. R. Gr. Hand-list*, iii. p. 79, n. 10614 (1871); *Gundl. J. f. O.* 1871, p. 273 (?); *Bodin. J. f. O.* 1872, p. 72 (breeding); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Coues, Birds N.-West*, p. 558 (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 375 (Cuba); *Gieb. Thes. Orn.* ii. p. 30 (1875); *Sclat. & Salv. P. Z. S.* 1876, p. 375; *Gundl. An. Soc. Esp. Hist. Nat.* vii. p. 400 (1878); *id. J. f. O.* 1878, pp. 162, 190 (Porto Rico); *Cory, B. Bahama I.* p. 183 (1880); *A. & E. Newt. Handb. Jam.* p. 112 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 22; *Salv. Cat. B. Strickl. Coll.* p. 530 (1882); *Sclat. List Vert. An.* 8th ed. p. 426 (1883); *Cory, B. Haiti and San Domingo*, p. 166 (1885); *Ridgw. Man. N. Am. B.* p. 119 (1887); *Cory, Auk*, 1888, p. 59; *Tristr. Cat. Coll. B.* p. 50 (Jamaica), p. 270 (Domingo) (1889); *Cory, B. W. Ind.* p. 260 (1889); *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. p. 298 (1891).

Dendrocygnus arborea, *Brew. Pr. Bost. Soc. N. H.* vii. p. 308 (1860).

? Dendrocygna autumnalis, *Taylor, Ibis*, 1864, p. 172 (Porto Rico).

Dendrocycna arborea, *Sclat. P. Z. S.* 1880, p. 509; *Rchnw. Vög. d. zool. Gärt.* p. 59 (1882); *B., B., & R. Water-Birds N. Am.* i. p. 480 (note) (1884).

Adult. Anterior half of the crown reddish brown, shading into black on the occiput, whence a black band runs down along the nape; sides of the head and of the neck dull greyish, indistinctly mottled with white; throat white; round the lower neck a kind of collar, interrupted behind, formed by white feathers, edged with black; upper back, scapulars, and tertials brown, with tawny edges to the feathers; rump and upper tail-coverts black; breast reddish brown, with indistinct whitish spots; lower down the breast has the feathers white along the middle, blackish on the edges; abdomen and under tail-coverts white, thickly covered with round black spots; feathers of the sides white in the middle and broadly edged and even banded with black; wing-coverts pale brown, with paler edges, the outermost and also the greater ones greyish, each with a black subapical spot; quills grey, blackish towards the tip, the under surface uniform blackish brown; under wing-coverts black, the smaller ones with narrow white stripes; tail dark brown; legs and bill black. Total length about 22 inches, wing 10·5, tail 3·8, culmen 2·1, tarsus 2·7.

Female somewhat smaller.

Young in down. Upper parts brown, lower parts white; a white band round the occiput; ear-coverts brown; four white spots, two on the sides of the back and two on the sides of the rump.

Hab. Bahamas and Antilles.

a. Ad. st.	Jamaica.	Purchased.
b. ♂ ad. sk.	Cuba.	Salvin-Godman Coll.
c. Pull. sk.	Virgin Gorda, W. I., Dec. (*C. I. Winch*).	Salvin-Godman Coll.
d. Skeleton.		
e. Sternum.	Jamaica.	P. H. Gosse, Esq. [P.].

8. **Dendrocycna guttata.** (Plate I.)

Anas guttata, *Forst. MS. et Mus. Lugd.* (*fide Schlegel*).
Anas guttulata, *Temm.* (*fide Wallace*).
Dendrocygna guttulata, *S. Müll. MS.* (*fide Sclater*).
Dendrocygna guttulata, *Wall. P. Z. S.* 1863, p. 36 (Bouru, Ceram, Celebes); *Sclat. P. Z. S.* 1864, p. 300; *Eyt. Syn. Anat.* p. 66 (1868); *D'Alb. & Salvad. Ann. Mus. Civ. Gen.* vii. p. 839 (Hall Bay) (1875); *Salvad. ibid.* viii. p. 386 (Bouru) (1876); *Rams. Pr. Linn. Soc. N. S. W.* i. p. 395 (1876); *Rchnw. Orn. Centralbl.* 1882, p. 23.
Anas punctata, "*Temm.*," *Finsch, Neu-Guin.* p. 183 (1865) (Halmahera, Batchian).
Dendrocygna guttata, *Schleg. Mus. P.-B.*, Anseres, p. 85 (1866) (descr. princeps); *Blyth, Ibis*, 1870, p. 176; *G. R. Gr. Hand-list*, iii. p. 79, n. 10612 (1871); *Wald. Tr. Z. S.* viii. p. 102 (1872); *Gieb. Thes. Orn.* ii. p. 31 (1875); *Rosenb. Reist. naar Geelvinkb.* p. 3 (1875) (Ternate); *Salvad. Ann. Mus. Civ. Gen.* ix. p. 49 (1876); *D'Alb. Sydn. Mail*, 1877, p. 248; *id. Ann. Mus. Civ. Gen.* x. pp. 19, 20 (1877); *id. Ibis*, 1877, p. 372; *Sharpe, Journ. Linn. Soc., Zool.* viii. p. 505 (1877); *Rosenb. Malay. Archip.* p. 279 (Celebes), p. 324 (Goram), p. 407 (Ternate) (1878–79); *Rams. Pr. Linn. Soc. N. S. W.* iii. p. 301 (1878), iv. p. 102, n. 210 (1879); *D'Alb. & Salvad. Ann. Mus. Civ. Gen.* xiv. p. 134 (Yarru I.) (1879); *D'Alb. Nuova Guin.* pp. 193, 451, 519, 585, 588 (1880); *Sclat. P. Z. S.* 1883, pp. 52, 200 (Larat, Timorlaut); *Blas. J. f. O.* 1883, p. 140 (Celebes); *Finsch, Vög. d. Südsee*, p. 29 (1884); *Forbes, P. Z. S.* 1884, p. 434; *Blas. J. f. O.* 1890, p. 146 (Mindanao); *Salvad. Agg. Orn. Pap. e Mol.* p. 210 (1891); *Meyer & Wiglesw. J. f. O.* 1894, p. 253 (Talaut I.).
Dendrocygna arcuata, *Rosenb.* (*nec Cuv.*) *Reis naar Zuidoostereil.* pp. 54 (Aru), 82, 83 (Kei), 101 (Goram) (1867).
Dendrocygna vagans, *Rosenb.* (*nec Eyt.*) *Malay. Archip.* p. 373 (1878–79); *Salvad. Ann. Mus. Civ. Gen.* xiv. p. 668 (1879).
Dendrocycna guttulata, *Sclat. P. Z. S.* 1880, p. 509; *Tristr. Cat. Coll. B.* p. 51 (1889).
Dendrocycna guttata, *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 401, n. 3 (1882); *id. Orn. Pap. e Mol.* iii. p. 388 (1882); *id. Agg. Orn. Pap. e Mol.* p. 210 (1891).

Adult. Upper part of the head dark brown; a black line along the hind-neck; back and wings dusky brown; the feathers of the back, scapulars, and wing-coverts edged with pale brown; lores brown; superciliary stripe, sides of the head, and upper part of the neck greyish, with dusky cross-lines, giving a mottled appearance; chin and throat uniform whitish; lower part of the neck dusky with white spots; rump brown; upper tail-coverts black, the basal ones broadly barred with white; upper breast rufous-brown, each

feather with a white spot at the tip; lower breast and abdomen whitish, with faint dusky lines across; feathers of the flanks with large white round spots, the longer feathers are almost barred with black: under tail-coverts whitish, with black bars: quills brown; tail almost black: "bill black; tarsi and feet ashy, more or less tinged with reddish; irides brown or chestnut" (*D'Albertis*). Total length about 17 inches, wing 8·5, tail 2·9, culmen 1·63, tarsus 1·62.

Female. Similar.

Young. Feathers of the flanks paler and with the white spots elongated and lanceolated (*Schlegel*).

Hab. Mindanao, Celebes, Moluccas, and New Guinea.

a. Ad. st.	[Sumatra.]	Purchased.	
b. ♀ ad. st.	Celebes.	Wallace Coll.	}
c. ♂ ad. sk.	Bouru.	Wallace Coll.	} (Types of Wallace's description.)
d. ♂ ad. sk.	Larat, Tenimber Islands, Aug.	H. O. Forbes, Esq. [C.].	

9. Dendrocycna eytoni.

Leptotarsis eytoni, *Gould, MSS.*; *Eyt. Mon. Anat.* p. 111 (1838); *Gould, B. Austr.* vii. pl. 15 (pt. xx., 1845); *Bp. Compt. Rend.* xliii. p. 649, n. 59 (1856); *Pelz. Novara Reise, Vögel*, p. 137 (1865); *Eyt. Syn. Anat.* p. 63 (1869); *G. R. Gr. Hand-list*, iii. p. 80, n. 10617 (1871).

Dendrocygna eytoni, *G. R. Gr. List B. Br. Mus.* iii. p. 132 (1844); *id. Gen. B.* iii. p. 612, n. 7 (1845); *Rchnb. Syn. Av.*, Natatores, t. 99. ff. 2357–58 (*ex Gould*) (1850); *Stanl. Sale-list Knowsley Men.* p. 45 (1851); *Sclat. P. Z. S.* 1864, p. 301; *Gould, Handb. B. Austr.* ii. p. 375 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 87 (1866); *Sclat. P. Z. S.* 1867, p. 686 (Zool. Gard.); *Diggl. B. Austr.* ii. pl. 144. f. 1 (1870); *Hutt. Cat. B. New Zeal.* pp. 35, 77 (1871); *Finsch, J. f. O.* 1872, p. 184; *Purdie, Tr. N. Z. Inst.* 1872, p. 213 (New Zealand); *Hector, ibid.*, note; *Buller, Hist. B. New Zeal.* pp. xxi, 265 (1873); *Finsch, J. f. O.* 1874, p. 201; *Gieb. Thes. Orn.* ii. p. 31 (1875); *Sharpe, Zool. Ereb. & Terr., Birds*, App. p. 31 (1875); *Casteln. & Rams. Pr. Linn. Soc. N. S. W.* i. p. 386 (Norman River, Gulf of Carpentaria) (1877); *Rchnw. Orn. Centralbl.* 1882, p. 23; *Buller, Man. B. New Zeal.* p. 67 (1882); *Sclat. List Vert. An.* 8th ed. p. 427 (1883); *Legge. Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Buller, Hist. B. New Zeal.* 2nd ed. ii. p. 268 (1888); *North, Cat. Nests & Eggs Austr. B.* p. 340 (1889); *Hartert, Kat. Vogelsamml.* p. 229(1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 297 (1891).

Dendrocygna versicolor, *Hartl. Erst. Nachtr. Vogelsamml.* p. 19, n. 220 (1846) (descr. nulla).

Dendrocygna arcuata, *Bennett* (*nec Cuv.*), *in Sclat. P. Z. S.* 1866, p. 149 (Sydney).

Dendrocygna (Leptotarsis) eytoni, *Bennett, P. Z. S.* 1866, p. 418; *Rams. Pr. Linn. Soc. N. S. W.* i. p. 195 (1876), *id. ibid.* ii. p. 200, n. 655 (1877); *id. Tab. List*, p. 22, n. 666 (1888).

Dendrocycna eytoni, *Sclat. P. Z. S.* 1880, p. 510; *Rchnw. Vög. d. zool. Gärt.* p. 59 (1882); *Tristr. Cat. Coll. B.* p. 50 (1889).

Adult. Upper part of the head, hind-neck, and breast pale ochreous brown: sides of the head and neck dull pale grey, fading into white on the throat; back and wings greyish brown; the feathers of the back and scapulars with paler edges; upper tail-coverts whitish buff, broadly edged with greyish brown; sides and lower part of the breast reddish, regularly barred with black, the black bars broader on the sides; feathers of the flanks very long, of a buff colour, and margined with black; abdomen and under tail-coverts buffy white; quills and tail brown; under wing-coverts with reddish and brown-grey bands; axillaries pale reddish along the middle, brown-grey on the edges: "irides dark brown; bill yellowish brown, largely blotched with black; the nail darker brown; legs and feet pale flesh-brown" (*Buller*); "feet bright rose-colour; bill reddish flesh-colour, with a large mottled patch in the centre; irides orange" (*Diggles*). Total length 16 inches, wing 9·5, tail 3, culmen 1·6, tarsus 2.

Female. Similar.

Hab. Australia; it straggles to New Zealand.

a. Ad. sk.	Australia.	Sir T. Mitchell [P.].
b–g. Ad. sk.	Australia (*Cockerell & Thorpe*).	Salvin-Godman Coll.
h, i, k. ♂ ♀ ad. et juv. sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
l, m. ♂ ♀ ad. sk.	N.W. Australia, March, May.	J. R. Elsey, Esq. [P.].
n. ♂ ad. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
o. Ad. st.	Port Essington.	Dr. Sibbald [P.].
p. Ad. st.	New South Wales.	Australian Museum [P.].
q, r. Ad. sk.	South Australia, Jan.	Capt. Sturt [P.].
s, t. Ad. st.	South Australia.	C. D. E. Fortnum, Esq. [P.].

24. CHENALOPEX.

	Type.
Chenalopex, *Steph. Gen. Zool.* xii. 2, p. 41 (1824)* ..	C. ægyptiacus.
Alopochen, *Stejn. Stand. Nat. Hist.* iv. *Birds*, p. 141 (1885)(=Chenalopex).	

Range. Africa, and South America.

Key to the Species.

a. Wing-coverts white ..... *ægyptiacus*, p. 167.
b. Wing-coverts black, with a metallic green lustre. *jubatus* †, p. 169.

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* Dr. Sharpe (Cat. Ost. Spec. B. Coll. Surg. p. 294) has attributed this genus to Dumont (Dict. Sc. Nat. viii. p. 393), who, however, only mentions the word *Chenalopex* as a *nomen vulgare* used by Aristoteles and as a generic term used by Moehring.

† Following Sclater and Salvin, I have left *Anser jubatus*, Spix, in the genus *Chenalopex*, but I have some doubt about its being congeneric with *C. ægyptiacus*.

1. Chenalopex ægyptiacus.

Anser ægyptiacus, *Briss. Orn.* vi. p. 284, pl. 27 (1760); *Bonn. Enc. Méth.* i. p. 118, pl. 29. f. 3 (1790); *Temm. Man. d'Orn.* iv. p. 523 (1835); *Naum. Vög. Deutschl.* xi. p. 416, Taf. 294 (1842); *Malh. Faun. Sicil.* p. 215 (1843); *Schleg. Rev. Crit.* p. cxi (1844); *Bruch, J. f. O.* 1854, p. 277; *Brehm, J. f. O.* 1855, p. 484; *Tayl. Ibis*, 1859, p. 54; *Schleg. Mus. P.-B.*, Anseres, p. 94 (1866); *Shell. Ibis*, 1871, p. 315.

Anas ægyptiaca, *Linn. S. N.* i. p. 197, n. 10 (1766); *Gm. S. N.* i. 2, p. 512, n. 10 (1788) (excl. var. β); *Lath. Ind. Orn.* ii. p. 840, n. 21 (1790) (excl. var. β); *Geoffr. Ménag. du Mus. d'Hist. Nat.*, art. *Oie d'Egypte*, pp. 1–4, pl. — (1801); *Shaw, Nat. Misc.* pl. 605 (1803); *Cuv. Règn. An.* i. p. 531 (1817); *Lath. Gen. Hist.* x. p. 244 (1824); *Cuv. Règn. An.* 2nd ed. i. p. 569 (1829); *Less. Tr. d'Orn.* p. 628 (1831); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 103 (1838); *Schleg. Rev. Crit.* p. cxi (1844); *Chapm. Trav. S. Afr.* ii. App. p. 421 (1868).

Oye d'Egypte, *D'Aubent. Pl. Enl.* 379 (1770): *Buff. Hist. Nat. Ois.* ix. p. 79, pl. 4 (1783).

Oye du Cap de Bonne-Espérance, *D'Aubent. Pl. Enl.* 982, 983.

Oye sauvage du Cap de bonne espérance, *Sonner. Voy. Ind. Or.* ii. p. 220 (1782).

Oie armée (*errore*), *Buff. Hist. Nat. Ois.* ix. p. 76 (excl. syn.) (1783).

Egyptian Goose, *Lath. Syn.* iii. 2, p. 453, n. 16 (1785); *Yarrell, P. Z. S.* 1833, p. 4 (trachea).

Anser africanus, *Bonn. Enc. Méth.* i. p. 119 (1790).

Anas merganser, *Naum. Naturg. Land- u. Wasser-Vög.* iii. pp. 329, 478, t. 53. f. 78 (1799).

Anas varia, *Bechst. Orn. Taschenb.* ii. p. 454, n. 39 (1803) (*ex Naum. l. c.* t. 53. f. 78), iii. p. 590 (1812); *id. Naturg. Deutschl.* (2nd ed.) iv. p. 1043, n. 18.

Anser varius, *Meyer & Wolf, Taschenb.* ii. p. 562 (1810), iii. p. 232 (1822); *Vieill. N. D.* xxiii. p. 335 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 464 (1825).

Chenalopex ægyptiaca, *Steph. Gen. Zool.* xii. p. 43, pl. 42 (1824); *Gould, B. Eur.* pl. 353 (1837): *Eyt. Mon. Anat.* pp. 22, 103, pl. 7 (skeleton and trachea) (1838); *Bp. Comp. List*, p. 56. n. 403 (1838); *G. R. Gr. List Gen. B.* p. 72 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxiv, 225 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 428 (1842); *Harris, Highl. of Æthiop.* p. 417 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 126 (1844); *Rüpp. Syst. Uebers.* p. 137, n. 487 (1845); *Des Murs, in Lefebvre, Voy. Abyss., Ois.* p. 170 (1845); *Vierth. Naumannia*, 1852, pp. 29, 55; *Strickl. Ann. & Mag. N. H.* 1852, p. 349; *Bp. Compt. Rend.* xliii. p. 649, n. 43 (1856); *Heugl. Syst. Uebers.* n. 682 (1856); *id. Ibis*, 1859, p. 348; *Linderm. Griechenl.* p. 158 (1860); *Heugl. Faun. Roth. Meer.* n. 285; *Brehm, Habesch*, p. 228; *Antin. Cat.* p. 112 (1864); *Eyt. Syn. Anat.* p. 53 (1869); *Doderl. Avif. Sicil.* p. 256 (1869); *Heugl. Peterm. Geogr. Mitth.* 1869, p. 411; *Tacz. J. f. O.* 1870, p. 55 (Constantina); *Blanf. Geol. & Zool. of Abyss.* p. 438 (1870); *Finsch, Tr. Zool. Soc.* vii. p. 300 (1870): *Tacz. J. f. O.* 1870, p. 55 (Constantina); *G. R. Gr. Hand-list*, iii. p. 74, n. 10557 (1871); *Shell. B. of Egypt*, p. 279 (1872); *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872); *Hartl. Griech. Jahresz.* iii. p. 288 (1875); *Altum, J. f. O.* 1877, p. 107 (Europe); *Bolle, ibid.* p. 209;

Fisch. & Rchnw. J. f. O. 1878, p. 248; *Fisch. ibid.* p. 296 (Kau), 1879, pp. 295, 296, 301; *Sclat. P. Z. S.* 1880, p. 498; *id. List Vert. An.* 8th ed. p. 416 (1883); *Salvad. Ann. Mus. Civ. Gen.* (2) i. pp. 241, 276 (Shoa) (1884); *Tristr. Faun. & Flora of Palest.* p. 114 (Dead Sea) (1884); *Sharpe, Layard's B. S. Afr.* p. 747 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 300 (1884–85); *Shell. Ibis*, 1888, p. 306; *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 319 (Shoa) (1888); *Dubois, Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 190 (1886) (Tanganyika); *Koenig, J. f. O.* 1888, p. 285; *Tristr. Cat. Coll. B.* pp. 51, 270 (1889); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 294 (1891); *id. Ibis*, 1892, p. 541; *Koenig, J. f. O.* 1893, p. 95.

Tadorna ægyptiaca, *Boie, Isis*, 1826, p. 981, 1830, p. 996.

Chenalopex ægyptiacus, *Wagl. Isis*, 1832, p. 1235; *G. R. Gr. Gen. B.* iii. p. 605, n. 1 (1845); *Rchnb. Syn. Av.*, Anseres, t. 102. ff. 236–37 (1845); *id. Av. Syst. Nat.* p. ix (1852); *Brehm, J. f. O.* 1853, Extraheft, p. 103, 1854, p. 84; *Licht. Nomencl. Av.* p. 101 (1854); *Blyth, J. A. S. B.* xxiv. p. 305 (Somali) (1855); *Brehm, Vogelf.* p. 369 (1855); *id. J. f. O.* 1856, pp. 329, 335, 398, 477, 1857, p. 357; *Homey. J. f. O.* 1859, p. 370; *Speke, Ibis*, 1860, p. 248; *Blyth & Speke, Rep. Coll. Somali Country*, p. 15 (1860); *Licht. Reisen*, ii. p. 559; *Hartl. J. f. O.* 1861, p. 272 (Bissao); *Livingst. Miss. Trav.* p. 204; *Kirk, Ibis*, 1864, p. 336; *Taylor, Ibis*, 1867, p. 71; *Layard, B. S. Afr.* p. 347 (1867); *Boc. Jorn. Ac. Sc. Lisb.* 1867, p. 329; *Gurn. Ibis*, 1868, p. 49 (Natal); *Tristr. Ibis*, 1868, p. 328 (Dead Sea); *Layard, Ibis*, 1869, p. 377; *Cab. in v. d. Deck. Reis.* iii. p. 51 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 803 (1870); *Landois, Zool. Gart.* 1871, p. 251 (Westphalia); *Shell. B. of Egypt*, p. 279 (1872); *Gieb. Thes. Orn.* i. p. 368 (1872); *Anderss. B. Damara Land*, p. 335 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1285 (1873); *Boc. Jorn. Ac. Sc. Lisb.* 1873, pp. 198, 289, 294, 1874, p. 45; *id. J. f. O.* 1876, p. 295 (Mossamedes, Humbe, Cunene, Rio Coroca); *Rchnw. Vög. zool. Gärt.* p. 63 (1882); *Bocage, Orn. d'Ang.* p. 497 (1882); *Butl., Feild., & Reid, Zoolog.* 1882, p. 427 (Natal); *Nathus. J. f. O.* 1882, p. 305 (egg); *Böhm, Orn. Centralbl.* 1882, p. 114; *B. O. U. List Brit. B.* p. 114 (1883); *Fischer, Zeitschr. ges. Orn.* 1884, p. 393 (Massailand); *Böhm, J. f. O.* 1885, pp. 62, 72; *Fischer, ibid.* p. 115; *Hartert, J. f. O.* 1886, p. 611 (Niger-Benuë); *Rchnw. J. f. O.* 1887, p. 46; *Matschie, ibid.* pp. 137, 144; *Hartert, ibid.* p. 268 (Wesel); *Emin, J. f. O.* 1891, pp. 339, 345; *Hartert, Kat. Vogelsamml.* p. 227, n. 3372 (1891); *Rchnw. J. f. O.* 1892, p. 6; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 564 (Somali) (1894); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 28 (1894).

Bernicla ægyptiaca, *Eyt. Cat. Br. B.* pl. 65 (1836).

Chenalopex africanus, *G. R. Gr. Gen. B.* iii. p. 605, n. 2 (1845); *Rchnb. Syn. Av.*, Natatores, t. 98. ff. 942–43 (1845); *Gieb. Thes. Orn.* i. p. 368 (1872).

Chenalopex varius, *Brehm, Vogelf.* p. 369 (1855); *id. Naumannia*, 1855, p. 297.

Anas ægyptica (*sic*), *Chapm. Trav. S. Afr.*, App. p. 421 (1868).

Casarca africana, *G. R. Gr. Hand-list*, iii. p. 80, n. 10625 (1871).

Anser (Chenalopex) ægyptiacus, *David & Oust. Ois. Chine*, p. 490 (Pekin) (1877).

Alopochen ægyptiaca, *Stejn. Stand. Nat. Hist., Birds*, p. 141, f. 66 (1885).

Hybrids.

Tadorna ægyptiaca × Anas boschas, *Leverk. J. f. O.* 1890, p. 221.

Adult male. Feathers round the base of the bill, a patch round the eyes, back of the neck, and ring round lower part of the latter ruddy; rest of the head and upper part of the neck greyish brown; mantle ruddy grey, finely lineated with dark grey; lower back, rump, and upper tail-coverts black; lower neck, breast, and flanks buff, finely lineated with grey; on the middle of the breast a maroon patch; abdomen white; under tail-coverts ruddy; scapulars and tertiaries ruddy; upper wing-coverts white, with a narrow black band near the tip of the greater ones; secondaries shining green; primaries, their coverts, bastard-wing, and tail black; inner under wing-coverts and axillaries white: "iris dark yellow; bill pink, with tip, margins, and base black; tarsi and feet pink" (*Ayres*). Total length 28 inches, wing 16, tail 9, bill 1·78, tarsus 3.

Female. Similar to the male, but smaller, and, according to Dr. Finsch, paler, and with the pectoral maroon patch smaller.

Hab. Africa and Palestine.

a. Pull. st.	[Bred in captivity.]	A. D. Bartlett, Esq.
b. Ad. st.	Ochtertire, Stirlingshire.	Sir D. Dundas [P.].
c. ♀ ad. st.	River Tweed, April 4.	
d. Ad. st.	River Tweed.	Purchased.
e. Ad. sk.	Egypt.	W. B. T. Turnbull, Esq. [P.].
f. Ad. sk.	Egypt.	Victor Ames, Esq. [P.].
g. ♂ ad. sk.	Egypt.	Hume Coll.
h. ♀ ad. sk.	Anseba Valley, Bogos, July 5.	W. T. Blanford, Esq. [C.].
i. Ad. sk.	Waliko, July 25 (*W. Jesse*).	Tweeddale Coll.
k, *l*, *m.* ♀ ad. sk.	Maragaz, July 28 (*W. Jesse*).	H. E. Dresser, Esq. [P.].
n, *o.* ♂ ad. sk.	Efat, Shoa, April (*Sir W. C. Harris*).	India Museum.
p. Ad. sk.	Lake Naiwascha.	A. G. Baxter, Esq. [C.].
q. Ad. sk.	Zambesi (*Dr. Bradshaw*).	Shelley Coll.
r. Juv. st.	South Africa.	Old Coll.
s, *t.* ♂ ♀ ad. sk.	Humbe, R. Cunene, Jan. (*Anchieta*).	Shelley Coll.
u–z. Ad. et juv. sk.	River Niger, Dec.	Dr. Baikie [C.].
a'. Skeleton.		Zoological Society.
b'. Skeleton.		
c', *d'.* Sterna and scapular girdles.		

Hybrid between "Penguin Duck" *and* C. ægyptiacus.

a. ♂ ad. st.	Died in captivity.	Zoological Society.

2. Chenalopex jubatus.

Anser jubatus, *Spix, Av. Bras.* ii. p. 84, t. 108 (1825) (*nec* Anas jubata, *Lath.* 1801); *Burm. Syst. Uebers.* iii. p. 433 (1856).

Anser polycomos, *Cuv. Mus. Paris*; *Less. Tr. d'Orn.* p. 627, n. 4 (1831); *Pucher. Rev. et Mag. de Zool.* 1850, p. 545 (=jubatus, *Spix*); *Hartl. J. f. O.* 1855, p. 419; *Schleg. Mus. P.-B.*, Anseres, p. 95 (1866).

Chenalopex jubatus, *Wagl. Isis*, 1832, p. 1235, n. 2; *G. R. Gr. Gen. B.* iii. p. 605, n. 4, pl. 164 (1845); *Rchnb. Syn. Av.*, Natatores, t. 102. ff. 234–235 (1845); *J. E. Gr. Glean. from Knowsl. Menag.* pl. xv. (1846); *Schomb. Guian. Reis.* iii. p. 762 (1848); *Taylor, Ibis*, 1864, p. 96 (Orinoco); *Sclat. & Salv. P. Z. S.* 1866, p. 200 (Lower Ucayali); *Eyt. Syn. Anat.* p. 53 (1869); *Pelz. Orn. Bras.* pp. 319, 459, lviii (1870); *Sclat. & Salv. P. Z. S.* 1873, p. 304; *Rchnw. Vög. zool. Gärt.* p. 63 (1882); *Salv. Ibis*, 1886, p. 172.

Chenalopex jubata, *G. R. Gr. List B. Brit. Mus.* iii. p. 126 (1844); *Bp. Compt. Rend.* xliii. p. 649, n. 44 (1856); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 128 (1873); *iid. P. Z. S.* 1876, p. 369; *Sclat. P. Z. S.* 1880, p. 499; *id. List Vert. An.* 8th ed. p. 416 (1883); *Tacz. Orn. Pér.* iii. p. 468 (1886); *Tristr. Cat. Coll. B.* p. 5 (1889).

Anas pollicaris, *Illig.*, undè

Anser pollicaris, *Licht. in Mus. Berol.*; *Gieb. Thes. Orn.* i. p. 373 (1872).

Chenalopex pollicaris, *Licht. Nomencl. Av.* p. 101 (1854).

Chenonetta jubata, *G. R. Gr.* (*nec Brandt*) *Hand-list*, iii. p. 74, n. 10558 (1871); *Sund. Meth. nat. Av. disp. Tent.* p. 145 (1872); *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 341 (1890).

Adult. Head, neck, and breast dull whitish grey, darker on the hind-neck; upper mantle and scapulars ruddy; lower mantle and inner scapulars brown; back, rump, upper tail-coverts, tail, and wings black with a green gloss; abdomen ruddy, whitish along the middle, changing into blackish brown on the lower part; under tail-coverts white; greater wing-coverts metallic green with a purple gloss; base of the secondaries white, forming a white speculum: "bill black, irides brown" (*Spix*): "tarsi and feet yellowish flesh-colour" (*Burmeister*). Total length about 20 inches, wing 12·25, bill 1·45, tarsus 2·6.

Hab. Amazonia and Guiana; apparently also Bolivia.

a, *b*, *c*. Ad. st.	S. America.	Sir R. Schomburgk (?) [C.].
d. Ad. sk.	Peruvian Amazons (*E. Bartlett*).	Salvin-Godman Coll.
e. Ad. sk.	Bolivia.	T. C. Bridges, Esq. [C.].
f. ♂ ad. sk.	Brazil (*Natterer*).	Salvin-Godman Coll.
g. Skeleton.		

25. TADORNA.

	Type.
Tadorna, *Leach, MS.*; *Flem. Phil. Zool.* ii. p. 260 (1822).	T. cornuta.
Vulpanser, *Keys. & Blas. Wirbelth. Eur.* p. 84 (1840) ..	T. cornuta.
Radjah, *Rchnb. Av. Syst. Nat.* p. x (1852)	T. radjah.
Gennæochen, *Heine, Nomencl. Mus. Hein.* p. 343 (1890) (=Radjah, *Rchnb.*).	

Range. Palæarctic and Australian Regions.

Key to the Species.

a. A prominent red knob at the base of the bill; head and upper part of the neck black, glossed with green; tail white, tipped with black ..... *cornuta*, p. 171.
b. No knob at the base of the bill; head and neck entirely white; tail black ..... *radjah*, p. 175.

1. Tadorna cornuta.

The Common Sheld-duck; Shieldrake.
Anas maritima, *Gesn. Aves*, p. 803 (1555).
Tadorna belonii, *Ray, Syn. Av.* p. 140 (1713).
Tadorna, *Briss. Orn.* vi. p. 344, pl. xxxiii. f. 2 (1760).
Anas tadorna, *Linn. S. N.* i. p. 195, n. 4 (1766); *Gm. S. N.* i. 2, p. 506, n. 4 (1788); *Lath. Ind. Orn.* ii. p. 854, n. 56 (1790); *Bonn. Enc. Méth.* i. p. 123, pl. 37. f. 2 (1790); *Lath. Tr. Linn. Soc.* iv. p. 117, t. xv. ff. 8, 9 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 239 (1811); *Temm. Man. d'Orn.* p. 539 (1815); *Vieill. N. D.* v. p. 158 (1816); *Dum. Dict. Sc. Nat.* vi. p. 353 (1817); *Temm. Man. d'Orn.* 2nd ed. ii. p. 833 (1820); *Licht. Verz. Doubl.* p. 84 (1823); *Ranz. Elem. di Zool.* iii. 9, p. 97, t. 30. f. 1 (1826); *Wern. Atlas*, Palmipèdes, pl. 38 (1828); *Less. Man. d'Orn.* ii. p. 416 (1828); *id. Tr. d'Orn.* p. 633 (1831); *Savi, Orn. Tosc.* iii. p. 166 (1831); *Temm. Man. d'Orn.* iv. p. 531 (1840); *Naum. Vög. Deutschl.* xi. p. 534, t. 298 (1842); *Schleg. Rev. Crit.* p. cxv (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 128 (1850); *Kjärb. Orn. Dan.* p. 363, Taf. 46, et *Suppl.* Taf. 25 (1852); *Pässl. J. f. O.* 1853, p. 243 (E. Finmark); *A. Brehm, J. f. O.* 1854, p. 84; *Vangerow, J. f. O.* 1855, p. 345 (Neumark); *Müll. J. f. O.* 1856, p. 232 (Camargue); *Buvry, J. f. O.* 1857, p. 123 (Algeria); *Schleg. Vog. Nederl.* p. 543, pls. 303, 304 (1858); *Antin. J. f. O.* 1858, p. 484 (Smyrna); *Bolle, ibid.* p. 489; *Quistorp, J. f. O.* 1860, p. 78; *Holland, ibid.* p. 305 (Ostseestrand); *Altum, J. f. O.* 1863, p. 109; *Schleg. Dierent.* f. p. 276 (1864); *id. Mus. P.-B.*, Anseres, p. 67 (1866); *Holtz, J. f. O.* 1868, p. 128 (Gottland I.); *Boie, J. f. O.* 1869, p. 97; *Homey. J. f. O.* 1870, p. 43 (E. Siberia); *Heugl. J. f. O.* 1871, pp. 10, 82 (Skorö, N. Europe); *Gieb. Thes. Orn.* i. p. 363 (1872); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Kinb. in Sund. Svensk. Fogl.* p. 1311, pl. lviii. f. 1 (1886).
? Anas subterranea, *Scop. Ann. I. Hist. Nat.* p. 67, n. 83 (1769).
Anas cornuta, *S. G. Gmel. Reis. Russl.* ii. p. 185, t. 19 (1774); *Collett, Nyt Mag. f. Nat.* 1877, p. 198.
Volpoca o Tadorna, *Ger. Stor. degli Ucc.* v. t. 576 (1776).
Tadorne, *D'Aubent. Pl. Enl.* 53; *Buff. Hist. Nat. Ois.* ix. p. 205, pl. xiv. (1783).
? Black-headed Duck, *Shaw, Trav.* p. 254.
Damietta Duck, *Lath. Syn.* iii. 2, p. 487, n. 41 (1785).
Shieldrake, *Lath. op. cit.* p. 504, n. 51 (1785).
Anas damiatica, *Gm. S. N.* i. 2, p. 535, n. 106 (1788) (*ex Hasselq. It.* p. 264, n. 35, 1757); *Lath. Ind. Orn.* ii. p. 850, n. 48 (1790); *Bonn. Enc. Méth.* i. p. 131 (1790); *Vieill. N. D.* v. p. 119 (1816); *Dum. Dict. Sc. Nat.* vi. p. 379 (1817); *Steph. Gen. Zool.* xii. 2, p. 108 (1824).
Tadorna tadorna, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Licht. Nomencl. Av.* p. 101 (1854); *Hartert, Kat. Vogelsamml.* p. 228 (1891); *id. Ibis*, 1892, p. 518 (E. Prussia).

Tadorna familiaris, *Boie, Isis,* 1822, p. 564.

Tadorna bellonii, *Steph. Gen. Zool.* xii. 2, p. 72. pl. 45 (1824); *Sw. Class. B.* ii. p. 368 (1836); *Eyt. Mon. Anat.* p. 105, pl. 1. ff. 3, 4 (trachea), pl. 3 (sternum), pl. 8. f. 3 (cæca), pl. 9 (skeleton) (1838); *Rchnb. Av. Syst. Nat.* p. x (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 52 (1856); *Hartm. J. f. O.* 1864, p. 235; *Collett, Norg. Fugl.* p. 63 (1868); *Eyt. Syn. Anat.* p. 55 (1869); *Collett, Orn. Bemärk.* 1871, p. 53.

Tadorna vulpanser, *Flem. Hist. Br. Anim.* p. 122 (1828); *Gould, P. Z. S.* 1834, p. 51 (Trebizond); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.* pl. 357 (1837); *Bp. Comp. List,* p. 56, n. 404 (1838); *id. Cat. Met. Ucc. Eur.* p. 70, n. 429 (1842); *Hartl. Verz. Ges. Mus.* p. 118 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 132 (1844); *id. Gen. B.* iii. p. 613, n. 1 (1845); *id. Cat. Hodgs. Coll. B. M.* p. 144 (1846); *Rchnb. Syn. Av.,* Natatores, t. 93. ff. 432–34 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 303, n. 1769 (1849); *A. Brehm, J. f. O.* 1855, p. 367; *Cass. Exp. Am. Squadr. China Seas & Japan,* ii. p. 248 (Macao) (1856) (cf. *J. f. O.* 1858, p. 450); *Homey. J. f. O.* 1859, p. 371; *Swinh. Ibis,* 1860, p. 67 (Amoy); *Tristr. ibid.* p. 81 (Tuggurt); *Powys, ibid.* p. 354 (Ionian Isl.); *Swinh. Ibis,* 1861, p. 344 (N. China), 1863, p. 434 (Formosa); *id. P. Z. S.* 1863, p. 324; *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76 (1863); *Jerd. B. of Ind.* iii. p. 794 (1864); *Allen, Ibis,* 1864, p. 189; *More, Ibis,* 1865, p. 442 (England); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Gould, B. Gr. Brit.* v. pl. 11 (1869); *Fritsch, Vög. Eur.* Taf. 50. f. 6 (1870); *Elwes & Buckl. Ibis,* 1870, p. 339 (Turkey); *Shell. Ibis.* 1871, p. 315; *Saund. ibid.* p. 376 (Spain); *Shell. B. of Egypt,* p. 281 (1872); *Durnf. Ibis,* 1874, p. 403 (N. Frisia); *Gulliv. P. Z. S.* 1875, p. 488; *Schmidt, P. Z. S.* 1880, p. 317; *Simson, Ibis,* 1882, p. 92 (E. Bengal); *Sclat. List Vert. An.* 8th ed. p. 428 (1883); *Leverk. J. f. O.* 1887, p. 212; *Styan, Ibis,* 1891, p. 496 (Yangtse).

Tadorna gibbera, *Brehm, Isis,* 1830, p. 997, n. 1; *id. Vög. Deutschl.* p. 856 (1831); *id. Vogelf.* p. 370 (1855).

Tadorna littoralis, *Brehm, Isis,* 1830, p. 997, n. 2; *id. Vög. Deutschl.* p. 856 (1831); *id. Vogelf.* p. 370 (1855).

Tadorna maritima, *Brehm, Isis,* 1830, p. 997, n. 3; *id. Vög. Deutschl.* p. 858 (1831); *id. Vogelf.* p. 370 (1855).

Vulpanser tadorna, *K. & B. Wirbelth. Eur.* pp. lxxxiv, 225 (1840); *Möschler, Naumannia,* 1853, p. 366 (Sarepta); *Wallengr. Naumannia,* 1854, p. 270 (Scandinavia); *Heugl. Syst. Uebers.* no. 688 (1856); *id. Peterm. Geogr. Mitth.* 1861, p. 311; *Altum, J. f. O.* 1863, p. 75 (Rottum I.); *Nordm. J. f. O.* 1864, p. 377 (Finnland); *v. Droste, J. f. O.* 1864, p. 422, 1867, p. 69, 1868, p. 43; *Meves, Œfv. K. Vet.-Ak. Forh.* 1868, p. 287; *Droste, Borkum,* p. 272 (1869); *Heugl. Peterm. Geogr. Mitth.* 1869, p. 408; *Goebel, J. f. O.* 1870, p. 143 (Djeper); *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872); *Dyb. J. f. O.* 1874, p. 326; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 44 (1877); *Finsch, Verh. z.-b. Ges. Wien,* 1879, p. 261 (W. Siberia); *Rchnw. Orn. Centralbl.* 1882, p. 35; *id. Vög. zool. Gärt.* p. 62 (1882); *Radde, Ornis Caucas.* p. 450 (1884); *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 343 (1890).

Tadorna belonii, *Blyth, P. Z. S.* 1842, p. 94; *Antin. Cat. Descr. Ucc.* p. 113 (1864); *Degl. & Gerbe, Orn. Eur.* ii. p. 499 (1867); *Smith, Ibis,* 1868, p. 456 (Portugal); *David & Oust. Ois. Chine,* p. 497 (1877).

Tadorna schachraman, *A. Brehm, J. f. O.* 1854, p. 84; *id. Vogelf.*

p. 370 (1855); *L. Brehm, Naumannia*, 1855, p. 291; *A. Brehm, J. f. O.* 1855, p. 367.

Anas (Vulpanser) tadorna, *Radde, Reis. S. O.-Sibir.* ii. p. 360 (1863).

Chenalopex tadorna, *v. Droste, J. f. O.* 1865, p. 353.

Anas vulpanser, *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 444 (1871).

Tadorna cornuta, *G. R. Gr. Hand-list*, iii. p. 80, n. 10618 (1871); *Swinh. P. Z. S.* 1871, p. 418 (China); *Hume, Str. Feath.* i. p. 260 (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1304 (1873); *Danf. & H. Brown, Ibis*, 1875, p. 427 (Transylvania); *B., B., R. u. S. J. f. O.* 1877, p. 336; *Dress. Ibis*, 1876, p. 419; *Blak. & Pryer, Ibis*, 1878, p. 213; *Pryer. Rowl. Orn. Misc.* iii. p. 100 (Mongolia) (1878); *Dress. B. Eur.* vi. p. 451, pl. 420 (pts. 67, 68, 1878); *Gigl. Icon. Avif. Ital.* fasc. ii. tav. 348 (1879); *Hume, Str. Feath.* vii. p. 492, viii. p. 115, n. 956 (1879); *Hume & Marsh. Game B.* iii. p. 153, pl. 18 (1880); *Sclat. P. Z. S.* 1880, p. 511; *Gigl. Ibis*, 1881, p. 214; *Seebh. Ibis*, 1882, p. 228 (Astrakhan); *Salv. Cat. B. Strickl. Coll.* p. 531 (1882); *B. O. U. List Brit. B.* p. 122 (1883); *Seebh. Ibis*, 1884, p. 175 (Nagaski); *Saund. Yarrell's Hist. Br. B.* iv. p. 352 (1884); *Seebh. Hist. Br. B.* iii. p. 520, pl. 66 (egg) (1885); *Salvad. El. Uce. Ital.* p. 256 (1886); *Tait, Ibis*, 1887, p. 375 (Portugal); *Wash. Mitth. orn. Ver. Wien*, 1887, p. 182 (Styria); *Koenig, J. f. O.* 1888, p. 296 (Tunis); *Saunders, Man. Br. B.* p. 407 (1889); *Lilf. Ibis*, 1889, p. 345 (Cyprus); *Tristr. Cat. Coll. B.* p. 50 (1889); *Seebh. B. Jap. Emp.* p. 241 (1890); *Evans, Ibis*, 1891, p. 72 (breeding); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 299 (1891); *Seebh. Ibis*, 1892, p. 27 (Heligoland); *De la Touche, Ibis*, 1892, p. 491 (Foochow and Swatow); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 423, pl. 251 (1892); *Pears. & Bidw. Ibis*, 1894, p. 232 (N. Norway).

Vulpanser (Anas) tadorna, *Barth. Nory. Fuglev.* p. 49 (1881).

Tadorna damiatica, *Stejn. Pr. U.S. Nat. Mus.* 1882, p. 38; *Schal. J. f. O.* 1890, pp. 5, 10, 39; *Rchnw. J. f. O.* 1890, p. 82; *Floericke, J. f. O.* 1891, pp. 171, 198, 291, 1892, p. 251.

Tadorna vulgaris, *Seebh. Ibis*, 1883, p. 33.

Hybrids.

Tadorna vulpanser ♂ × Casarca cana ♀, *Sclat. P. Z. S.* 1859, p. 442, pl. clviii*; *id. Ibis*, 1859, p. 474; *id. List Vert. An.* 8th ed. p. 428 (1883).

Anas tadorna × Anas boschas, *Münter, J. f. O.* 1853, p. 302.

Adult male. Head and upper part of the neck dark glossy green; round the lower neck a broad white collar; a band of rich chestnut covers the upper part of the back, the space before the bend of the wing, and the upper part of the breast; remainder of the back, rump, and upper tail-coverts white, scapulars black, except the inner ones, which are white; a band along the middle of the breast and belly dark brown; sides and flanks white; under tail-coverts rufous; wing-coverts white; primaries very dark brown; speculum on the secondaries green; long inner secondaries with rich chestnut outer webs; tail-feathers white, tipped with black: bill and knob at the base bright red; irides brown; legs, toes, and their membranes flesh-pink. Total length 24–26 inches, wing 13, tail 5·2, culmen 2·4, tarsus 2.

Female. Rather smaller than the male; less bright in colours, and has no knob at the base of the bill.

Young birds "of the year in August have the beak flesh-colour, the head and neck brown, chin and front of the neck white; inter-scapulars brown; wing-coverts white; inner secondaries white, edged with chestnut; primaries black; speculum becoming green; all the under surface white; legs flesh-colour" (*Farrell*).

Nestlings in down are dark brown above and white below: the white on the underparts extending to the forehead, sides of the head and neck, wings, scapulary region, and sides of the rump (*Seebohm*).

Hab. British Islands, across Europe and South Siberia to Japan, during the breeding-season; Southern Europe, Northern Africa, Western Asia, Northern India, Southern China, Formosa, and Japan in winter.

a. Ad. sk.	No locality.	Mrs. Wakeling [P.].
b. Ad. sk.	No locality.	W. T. Blanford, Esq. [P.].
c. Pull. sk.	No locality.	Salvin-Godman Coll.
d. Pull. sk.	No locality.	Gould Coll.
e. Ad. st.	Gt. Britain.	Gould Coll.
f. ♂ ad. sk.	North Uist, Hebrides, July (*H. J. E.*).	H. J. Elwes, Esq. [P.].
g, h. ♂ ♀ juv. sk.	St. Andrew's, N. Scotland, Dec.	J. A. W. Cook, Esq. [P.].
i, k. Pull. st.	Kirkwall.	Purchased.
l. Pull. sk.	Knox I., Farne Is., June.	Salvin-Godman Coll.
m, n. ♂ ♀ ad. sk.	Norfolk, Jan.	J. H. Gurney, Esq. [P.].
o. ♀ imm. sk.	Aldeburgh, Suffolk, July.	Colonel Irby [P.].
p. ♂ ad. sk.	Brighton, Feb. (*E. V. Seebohm*).	Seebohm Coll.
q, r. Imm. sk.	Hayling I.	J. W. Tyndale, Esq. [P.].
s. ♀ juv. sk.	Havre, Dec. (*V. Pluche*).	Seebohm Coll.
t. Pull. st.	Tunis.	Fraser [C.].
u. ♂ imm. sk.	Damietta, Egypt, Feb. (*Philipponi*).	Shelley Coll.
v. Ad. sk.	Alexandria, Egypt, March (*G. E. S.*).	Shelley Coll.
w. Ad. sk.	Belutchistan, Feb. (*W. T. Blanford*).	Hume Coll.
x. Imm. sk.	Kattiawar, Dec.	Hume Coll.
y–b'. Juv. sk.	Allygurh.	Hume Coll.
c'. ♂ imm. sk.	Bheema, Etawah, Dec. (*A. Anderson*).	Seebohm Coll.
d'. Imm. sk.	Etawah.	Hume Coll.
e', f'. ♂ ad. et ♀ juv. sk.	Oudh, Jan.	Hume Coll.
g'. Ad. st.	Nepal.	B. H. Hodgson, Esq. [P.].
h', i'. ♂ imm. sk.	Sultanpur, Gurgaon, Nov. (*W. N. Chill*).	Hume Coll.
k'. ♂ imm. sk.	Mohungunj, Jan. (*G. Reid*).	Hume Coll.
l'. ♂ ad. sk.	Calcutta, April.	Hume Coll.
m'–p'. ♂ ad. sk.	Lobnóor, Turkestan, March (*Prjevalsky*).	Seebohm Coll.

q'. Ad. sk.	China (*Tuckett*).	Tweeddale Coll.
r', *s'*. Ad. sk. et st.	Shanghai, China.	F. Webb, Esq. [P.].
t'. Ad. sk.	Shanghai, China (*Michie*).	Seebohm Coll.
u'. Juv. sk.	Amoy, China (*R. Swinhoe*).	Seebohm Coll.
v'. Juv. sk.	Yokohama, Japan (*J. Pryer*).	Seebohm Coll.
w'–a''. ♂ ad. et juv. sk.	Nagasaki, Japan, Jan., Nov.	F. Ringer, Esq. [P.].
b''. Skeleton.		
c''–f''. Sterna.		

2. Tadorna radjah.

Sarcelle des Malais, *Garn. Voy. Coq., Zool. Atlas*, pl. 49 (1826).

Anas radjah, *Garn. Voy. Coq., Zool.* i. 2, p. 302 (1828); *Less. Man. d'Orn.* ii. p. 417 (1828) (Bouru); *id. Tr. d'Orn.* p. 634 (1831); *id. Compl. de Buff., Ois.* ix. p. 530 (1837); *id. op. cit.* 2nd ed. p. 719 (1838); *Müll. Verh. Land- en Volkenk.* p. 159 (1839–44); *Wall. Ann. & Mag. N. H.* (2) xx. p. 478 (Aru) (1857); *Finsch, Neu-Guin.* p. 183 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 69 (1866); *Gieb. Thes. Orn.* i. p. 360 (1872); *Rosenb. Reist. naar Geelvinkb.* pp. 9 (Ternate), 84 (Andai), 118 (1875); *id. Malay. Archip.* pp. 324 (Ceram), 407, 564 (1878–79); *Büttik. Not. Leyd. Mus.* viii. p. 68 (1886).

Tadorna radjah, *Eyt. Mon. Anat.* p. 106 (1838); *Gould, B. Austr.* vii. pl. 8 (pt. xiv., 1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 132 (1844); *id. Gen. B.* iii. p. 613, n. 2 (1845); *Rchnb. Syn. Av.*, Natat. t. iiii. ff. 396, 435–36 (1845); *Macgill. Narr. Voy. Rattlesn.* ii. p. 358 (1852); *Licht. Nomencl. Av.* p. 101 (1854); *G. R. Gr. P. Z. S.* 1858, p. 198; *id. Cat. B. New Guin.* p. 63 (1859); *id. P. Z. S.* 1860, p. 365 (Batchian, Gilolo), 1861, p. 438; *Wall. P. Z. S.* 1863, p. 36 (Bouru, Moluccas, New Guinea); *Rosenb. N. T. N. I.* xxv. p. 256, n. 302 (1863); *id. J. f. O.* 1864, p. 138, n. 302; *Sclat. P. Z. S.* 1864, pp. 189, 190; *Gould, Handb. B. Austr.* ii. p. 360 (1865); *Rosenb. Reis naar Zuidoostereil.* p. 54 (Aru) (1867); *Eyt. Syn. Anat.* p. 56 (1869); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 194, 217, 386, 395 (Port Moresby) (1876), ii. p. 200, n. 652 (1877); *Mast. ibid.* p. 276 (1877); *Rams. P. Z. S.* 1877, p. 346; *Sharpe, Journ. Linn. Soc.* xiii. pp. 321, 505 (1877); *Salvad. Ann. Mus. Civ. Gen.* x. p. 166 (1877); *Leuz, J. f. O.* 1877, p. 381 (Ceram); *Diggl. B. Austr.* ii. pl. 111 (1877); *Rams. Pr. Linn. Soc. N. S. W.* iii. p. 300 (1878), iv. p. 102, n. 209 (1879); *Rosenb. Malay. Archip.* pp. 373 (Aru), 396 (Salawatty) (1878–79); *Sharpe, Journ. Linn. Soc.* xiv. p. 688 (1879); *Sclat. P. Z. S.* 1880, pp. 511, 535; *D'Alb. Nuov. Guin.* pp. 34, 50, 582 (1880); *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 401, n. 4 (1882); *id. Orn. Pap. e Mol.* iii. p. 391 (1882); *Salv. Cat. B. Strickl. Coll.* p. 532 (1882); *Sclat. P. Z. S.* 1883, pp. 52, 195, 200 (Larat, Timorlaut); *Finsch, Vög. d. Südsee*, p. 29 (1884); *Meyer, Sitzb. u. Abh. Gesellsch. Isis*, 1884, Abh. i. p. 57; *Forbes, P. Z. S.* 1884, p. 434; *Meyer, Zeitschr. ges. Orn.* i. p. 295 (1884); *Pleske, Bull. Ac. Pétersb.* xxix. p. 538 (1884); *Guillem. P. Z. S.* 1885, p. 665 (Waigiou, Jobi); *North, Pr. Linn. Soc. N. S. W.* (2) ii. p. 446 (1887); *Rams. Tab. List*, p. 22, n. 663 (1888); *Tristr. Cat. Coll. B.* p. 50 (1889); *id. Ibis*, 1889, p. 558 (Ins. Fergusson); *Salvad. Ann. Mus. Civ. Gen.* (2) x. p. 828 (1891); *id. Agg. Orn. Pap. e Mol.* p. 210 (1891); *Hartert, Kat.*

Vogelsamml. p. 228 (1891); *Meyer, J. f. O.* 1892, p. 265; *North, Cat. Nests & Eggs Austr. B.* p. 338 (1889).

Radjah eytoni, *Rchnb. Av. Syst. Nat.* p. x (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 51 (1856).

Anas leucomelas, *Garn., fide Bp. Compt. Rend.* xliii. p. 649, in syn. Radjah eytoni (1856); *G. R. Gr. P. Z. S.* 1860, p. 365, in syn. Tadornæ radjah.

Radjah radjah, *G. R. Gr. Hand-list*, iii. p. 80, n. 10619 (1871); *Sund. Meth. nat. Av. disp. Tent.* p. 146 (1872).

Vulpanser radjah, *Rchnw. Orn. Centralbl.* 1882, p. 36.

Gennæochen radjah, *Heine, Nomencl. Mus. Hein. Orn.* p. 343 (1890).

Adult male. Head, neck, breast, and abdomen white; back, scapulars, rump, and upper tail-coverts black; the mantle vermiculated with narrow chestnut lines; a chestnut pectoral band, with narrow black lines; under tail-coverts and lower flanks brown-black, vermiculated with narrow white lines; upper wing-coverts white, with a black band near the tip of the greater ones; bastard-wing, primary-coverts, and primaries black; a glossy green speculum on the secondaries, edged with black posteriorly; tips of the secondaries broadly white; inner secondaries or tertials brown-black, rich chestnut on the outer web; outer under wing-coverts black, the inner ones white; tail black: "eyelids yellow; iris milk-white; bill and feet white; claws dusky white; nostrils blackish" (*Wallace*). Total length about 19 inches, wing 11, tail 5, culmen 1·75, tarsus 2·12.

Female. Similar to the male.

Young birds have the upper part of the head and the nape dark reddish, the upper wing-coverts edged with blackish, the black band near the tips of the greater wing-coverts broader, and the green speculum duller.

Australian specimens are larger, and have the back much more chestnut than those from the Moluccas and Papuan Islands.

Hab. Moluccas, Papuan Islands, and Australia.

a, b. Ad. et imm. sk.	Gilolo.	A. R. Wallace, Esq. [C.].
c. Ad. sk.	Morty Is.	A. R. Wallace, Esq. [C.].
d. Ad. sk.	Morty Is. (*A. R. W.*).	Tweeddale Coll.
e, f. ♂ ad. sk. et ad. st.	Batchian.	A. R. Wallace, Esq. [C.].
g, h. ♂ ad. et imm. sk.	Bouru.	A. R. Wallace, Esq. [C.].
i. Ad. sk.	Ceram.	A. R. Wallace, Esq. [C.].
k. ♂ juv. sk.	Isl. of Larat, Timor Laut, Aug.	H. O. Forbes, Esq. [C.].
l. ♀ juv. sk.	Isl. of Larat, Timor Laut, Sept. (*H.O.F.*).	Tweeddale Coll.
m. ♂ ad. sk.	New Guinea.	H. J. Elwes, Esq. [P.].
n. ♂ ad. sk.	Nekoora, S.E. New Guinea, Dec.	Tweeddale Coll.;
o. Ad. st.	Australia.	Major-Gen. Hardwicke [P.].
p. Ad. st.	Australia.	Lady Carrington [P.].
q, r. Ad. sk.	Australia (*Cockerell & Thorpe*).	Salvin-Godman Coll.

s, *t*. Ad. st.	Port Essington.	Capt. W. Chambers [P.].
u, *v*. Ad. sk.	Queensland.	Hume Coll.
w. ♂ ad. sk.	Moreton Bay.	E. Hargitt, Esq. [P.].

26. CASARCA.

Type.

Casarca, *Bp. Comp. List*, p. 56 (1838) ..... C. rutila.
Nettalopex, *Heine, Nomencl. Mus. Hein. Orn.* p. 343 (1890) (=Casarca, *Bp.*).

Range. Confined to the Old World and Australian Region.

Key to the Species.

a. Under tail-coverts fulvous or chestnut.
  a'. Under tail-coverts fulvous; back and scapulars uniform rufous; breast and abdomen uniform cinnamon or rufous.
    a''. Head buff, deepening into cinnamon on the neck; male with a black collar, female without ..... *rutila*, p. 177.
    b''. Head and neck ash-coloured, the anterior part of the head white in the female.... *cana*, p. 182.
  b'. Under tail-coverts chestnut; back and scapulars black, waved with grey lines; male with the head and neck glossy black; female with the head and upper part of the neck pure white ..... *variegata*, p. 183.
b. Under tail-coverts black; breast rufous; male with the head and upper part of the neck black, with a green gloss; female with the head brown, and a white band of feathers round the base of the bill ..... *tadornoides*, p. 185.

1. Casarca rutila.

Ruddy Sheldrake.
Anas aurantia, *Marsill. Danub.* v. tab. 54 (1744).
Anas persica, *Frisch, Av.* t. 167 (♀) (1763).
Anas ferruginea, *Cat. Vroeg. Adumbr.* p. 358.
Anas casarca, *Linn. S. N.* iii. App. p. 224 (1768); *S. G. Gm. Reise*, ii. p. 182, t. 15 (1774); *Gm. S. N.* i. 2, p. 511, n. 46 (1788); *Lath. Ind. Orn.* ii. p. 841, n. 24 (1790); *Bonn. Enc. Méth.* i. p. 126, pl. 24. f. 2 (1790); *Savigny, Descr. de l'Egypt, Ois.* pl. 10. f. 1 (1809); *Bechst. Orn. Taschenb.* iii. p. 589 (1812); *Temm. Man. d'Orn.* p. 535 (1815); *Less. Tr. d'Orn.* p. 633 (1831); *Temm. & Schleg. Faun. Jap., Aves*, p. 128 (1850); *Tobias, J. f. O.* 1853, p. 217 (Oberlausitz); *Pässler, J. f. O.* 1854, p. 380 (Tauris); *Müll. J. f. O.* 1856, p. 232 (Camargue); *Buvry, J. f. O.* 1857, p. 123 (Algeria); *Finsch, J. f. O.* 1859, p. 386 (Bulgaria); *Linderm. Vög. Griechenl.* p. 159 (1860); *Radde, Beitr. u. Kennt. Russ. Reiches*, xxxiii. p. 215 (1861); *Krüper, J. f. O.* 1862, p. 317 (Greece); *Wright, Ibis*, 1864, p. 155 (Malta); *Schleg. Mus. P.-B.*, Anseres, p. 66 (1866); *Wright, Ibis*, 1870, p. 492 (Malta); *Homey. J. f. O.* 1870, p. 431; *Gieb. Thes. Orn.* i. p. 347 (1872); *Hartl. Griech. Jahresz.* iii. p. 289 (1875).
Anas rutila, *Pall. Nov. Comm. Petrop.* xiv. 1, p. 579, tab. 22. f. 1

(1770); *id. Zoogr. Rosso-As.* ii. p. 242 (1811); *Temm. Man.* 2nd ed. ii. p. 832 (1820); *Licht. Verz. Doubl.* p. 84 (1823); *Werner, Atlas, Palmipèdes*, pl. 30 (1827); *Savi, Orn. Tosc.* iii. p. 168 (1831); *Ménétr. Cat. Rais.* p. 57, n. 195 (Bakou: 1832); *Temm. Man.* iv. p. 531 (1840); *Nordm. in Démid. Voy.* iii. p. 286 (1840); *Naum. Vög. Deutschl.* xi. p. 564, Taf. 299 (1842); *Yarr. Brit. B.* iii. p. 137 (1843); *Schleg. Rev. Crit.* p. cxvi (1844); *Kjærb. Orn. Dan.* pl. 48 (1854); *Sund. Sv. Fogl.* pl. 83. f. 1 (1856); *Costa, Fauna Regno di Nap., Ucc.* pt. 2, p. 28, t. viii. (1857); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Palmén, J. f. O.* 1876, p. 56.

Germano forestiero, *Ger. Stor. degli Ucc.* v. tav. 571 (1776).

Collared Duck, *Gentlem. Mag.* xlii. t. p. 161 ( ) (*fide Latham*).

Ruddy Goose, *Lath. Syn.* iii. 2, p. 456, n. 18 (1785); *id. Suppl.* i. p. 273 (1787).

Anas cosarca, *Dum. Dict. Sc. Nat.* vi. p. 377 (1817).

Anser casarca, *Vieill. N. D.* xxiii. p. 341 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 462 (1825).

Tadorna rutila, *Boie, Isis*, 1822, p. 364; *Steph. Gen. Zool.* xii. 2, p. 71 (1824); *Brehm, Handb. Naturg. Vög. Deutschl.* p. 859 (1831); *Sykes, P. Z. S.* 1832, p. 167, n. 215 (Dukhun, Guzerat); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.* pl. 358 (1837); *Fraser, P. Z. S.* 1839, p. 122 (Erzeroum); *Jerd. Madr. Journ.* xii. p. 220, n. 286 (1840); *Blyth, P. Z. S.* 1842, p. 94; *Tayl. Ibis*, 1859, p. 54; *Powys, Ibis*, 1860, p. 354 (Ionian Is.); *Sclat. P. Z. S.* 1864, p. 190, 1866, p. 150; *Taylor, Ibis*, 1867, p. 71 (Egypt); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Elw. & Buckl. Ibis*, 1870, p. 339 (Dobrudscha); *Shell. Ibis*, 1871, p. 315; *Saund. Ibis*, 1871, p. 396 (S. Spain, breeding); *Garrod, P. Z. S.* 1873, p. 467 (carotids), p. 639 (muscles); *Irby, Orn. Str. Gibr.* p. 197 (1875); *Danf. & H. Brown, Ibis*, 1875, p. 426 (Transylvania); *Dress. Ibis*, 1876, p. 419; *Forbes, P. Z. S.* 1877, pp. 307, 312 (bursa Fabricii); *Durnf. Ibis*, 1878, p. 35 (Asia Minor); *Schmidt, P. Z. S.* 1880, p. 317; *Sclat. P. Z. S.* 1880, p. 511; *Seebh. Hist. Brit. B.* iii. p. 524, pl. 66 (egg) (1885); *Tristr. Cat. Coll. B.* pp. 50, 270 (1889); *Seebh. B. Jap. Emp.* p. 241 (1890); *Campb. Ibis*, 1892, p. 245 (Corea); *Elliot, Zool.* 1892, p. 311 (Donegal).

Tadorna rubra, *Brehm, Isis*, 1830, p. 997.

Casarca rutila, *Bp. Comp. List*, p. 56, n. 405 (1838); *Eyt. Mon. Anat.* p. 106 (1838); *Bp. Cat. Met. Ucc. Eur.* p. 70, n. 430 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 132 (1844); *id. Gen. B.* iii. p. 613, n. 1 (1845); *Rchnb. Syn. Av.*, Natatores, t. 93. ff. 426-427 (1845); *Rüpp. Syst. Ueb.* p. 138, n. 490 (Egypt, 1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 145 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 303, n. 1768 (1849); *Rchnb. Av. Syst. Nat.* p. x (1852); *Vierth. Naumannia*, 1852, p. 44; *Licht. Nomencl. Av.* p. 101 (1854); *Brehm, J. f. O.* 1855, pp. 367, 484; *id. Voyelf.* p. 370 (1855); *Bp. Compt. Rend.* xliii. p. 649, n. 46 (1856); *Heugl. Syst. Uebers.* n. 689 (1856); *Brehm, J. f. O.* 1857, pp. 78, 384; *Loche, Cat. Mamm. et Ois. Algér.* p. 140 (1858); *Adams, P. Z. S.* 1858, p. 509, 1859, p. 189 (Ladakh); *Sclat. P. Z. S.* 1859, p. 206 (breeding); *Salv. Ibis*, 1859, pp. 357, 362 (E. Atlas); *Swinh. Ibis*, 1860, p. 67 (Amoy); *Tristr. ibid.* p. 81 (N. Africa); *Swinh. Ibis*, 1861, p. 344 (China); *Heugl. Peterm. Geogr. Mitth.* 1861, p. 311; *Swinh. Ibis*, 1863, p. 434 (Formosa); *id. P. Z. S.* 1863, p. 324; *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76

(1863); *Hartm. J. f. O.* 1863, pp. 234, 236; *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *Antin. Cat. Descr. Ucc.* p. 113 (1864) (Egypt, Asia Minor); *Jerd. B. of Ind.* iii. p. 791 (1864); *Adams, Ibis*, 1864, p. 34; *id. J. f. O.* 1864, p. 457; *De Fil. Viagg. in Persia*, p. 342 (1865); *Loche, Expl. Sc. Algér.* ii. p. 366 (1867); *Pelz. Ibis*, 1868, p. 321 (Puga, Thibet); *id. J. f. O.* 1868, p. 37 (Puga); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Beavan, Ibis*, 1868, p. 401 (India); *Dyb. & Parrex, J. f. O.* 1868, p. 339 (Dauria); *Gould, B. Gr. Brit.* v. pl. 12 (1869); *Eyt. Syn. Anat.* p. 56 (1869); *Heugl. Peterm. Geogr. Mitth.* 1869, p. 408; *Tacz. J. f. O.* 1870, p. 55 (Constantine); *Fritsch, Vög. Eur.* pl. 47. f. 9 (1870); *G. R. Gr. Hand-list*, iii. p. 80, n. 10621 (1871); *Swinh. P. Z. S.* 1871, p. 418 (China); *Fritsch, J. f. O.* 1872, p. 369 (Bohemia); *Sund. Met. nat. Av. disp. Tent.* p. 146 (1872); *Salvad. Faun. Ital., Ucc.* p. 256 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1306 (1873); *Hume, Str. Feath.* i. p. 260 (1873); *Adam, ibid.* p. 401 (1873); *Hume & Anders. Lahore to Yark.* p. 296 (1873); *Hume, Nests & Eggs*, p. 641 (1873); *Tacz. & Dyb. J. f. O.* 1873, p. 108 (Dauria); *Ball, Str. Feath.* ii. p. 437 (1874); *Hume, op. cit.* iii. p. 193 (Upper Pegu) (1875); *Blyth, B. Burm.* p. 165 (Arakan, Bhamo) (1875); *Butl. Str. Feath.* iv. p. 28 (1876); *Scully, ibid.* p. 198 (E. Turkestan) (1876); *Fairb. ibid.* p. 264 (Khandala); *Blanf. East. Pers.* ii. p. 303 (1876); *Schal. J. f. O.* 1876, p. 189 (Persia); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 44 (1877); *Butl. Str. Feath.* v. p. 234 (1877); *David & Oust. Ois. Chine*, p. 497 (1877); *Blak. & Pryer, Ibis*, 1878, p. 213; *Schal. Orn. Centralbl.* 1878, pp. 12–13, 76; *Brehm, J. f. O.* 1878, p. 365; *Prjev. Rowl. Orn. Misc.* iii. p. 100 (Mongolia) (1878); *Hume & Davis. Str. Feath.* vi. p. 489 (Tenasserim, Kolan Island, Mergui Archip.) (1878); *Hume, Str. Feath.* viii. p. 115, n. 654 (1879); *Scully, ibid.* p. 362 (Nepal); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 261 (W. Siberia); *Hume & Marsh. Game B. of Ind.* iii. p. 123, pl. 17 (1880); *Bidd. Ibis*, 1881, p. 99 (Gilgit); *Gigl. ibid.* p. 214 (Italy); *Schal. J. f. O.* 1881, p. 296; *C. Swinh. Ibis*, 1882, p. 124 (Kandahar); *Oates, Str. F.* x. p. 245 (Pegu) (1882); *Rchnw. J. f. O.* 1882, p. 122 (Hamburg); *Salvad. El. Ucc. Ital.* p. 257 (1886); *Scully, J. A. S. B.* lvi. p. 89 (1877); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 544 (Shoa) (1888); *Koenig, J. f. O.* 1888, p. 285 (Tunis); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 191 (1889); *Huet, Le Natur.* xii. pp. 107, 108 (1890); *De la Touche, Ibis*, 1892, p. 491 (China).

Vulpanser rutila, *K. & B. Wirbelth. Eur.* pp. lxxxiv, 225 (1844); *v. d. Mühle, Beitr. Orn. Griechenl.* p. 122 (1844); *Rchnw. Orn. Centralbl.* 1882, p. 36 (1882); *id. Vög. zool. Gärt.* p. 62 (1882).

Tadorna casarca, *Macgill. Man. Brit. Orn.* ii. p. 163 (1842); *Drake, Ibis*, 1867, p. 430 (Morocco); *Degl. & Gerbe, Orn. Eur.* 2nd ed. ii. p. 501 (1867); *Doderl. Avif. Sicil.* p. 257 (1869); *Dress. B. Eur.* vi. p. 461, pl. 421 (1875); *Anders. Yunn. Exped.* p. 699 (1879); *Legge, B. Ceyl.* p. 1070 (note, Ceylon ?) (1881); *Seebh. Ibis*, 1882, p. 228 (Astrakhan); *Salv. Cat. B. Strickl. Coll.* p. 532 (1882); *B. O. U. List Brit. B.* p. 122 (1883); *Scl. List Vert. An.* 8th ed. p. 428 (1883); *Oates, B. Brit. Burm.* ii. p. 277 (1883); *Seebh. Ibis*, 1884, p. 270 (Kiukiang); *Saund. Yarrell's Hist. Br. B.* iv. p. 347 (1884–85); *Swinh. & Barnes, Ibis*, 1885, p. 137; *Lilford, Ibis*, 1889, p. 345 (Cyprus); *Hume, Nests & Eggs (Oates ed.)*, iii. p. 286 (1890); *Rchnw. J. f. O.* 1890, p. 82; *Evans, Ibis*, 1891, p. 72 (breeding); *Dress. ibid.* p. 369 (Erzeroum); *Collett, Forh. Selsk. Chr.* 1890 (1891), no. 4, pp. 17–19 (Norway); *Sharpe, Sec.*

Yark. Miss., Aves, p. 128 (1891); *Lilford, Col. Fig. Br. B.* pt. xx. (1891); *Hartert, Kat. Vogelsamml.* p. 228 (1891); *Ogilvie, Zool.* 1892, pp. 392–398 (Brit. Isl.); *Ussher, t. c.* pp. 334, 335 (Ireland); *Vanh. Verh. Ges. Erdk. Berl.* xx. p. (Greenland) (1893).

Anas (Casarca) rutila, *Brehm, J. f. O.* 1854, p. 84 (Sudan).

Anas (Vulpanser) rutila, *Radde, Reis. S. O.-Sibr.* ii. p. 361, Taf. xiv. f. 1 (pullus) (1863).

Vulpanser rutilus, *Radde, Ornis Caucas.* p. 351 (1884).

Cairina rutila, *Tacz. P. Z. S.* 1887, p. 611 (Corea); 1888, p. (Corea).

Nettalopex rutila, *Heine u. Rchnw. Nomencl. Mus. Hein. Orn.* p. (1890).

Hybrids.

Casarca rutila ♂ × C. cana ♀, *Sclat. P. Z. S.* 1859, p. 442; *id. Ibis*, 1859, p. 474.

Tadorna rutila × Chenalopex ægyptiaca, *Sclat. P. Z. S.* 1886, p. 2.

Tadorna casarca × Querquedula falcata ?, *Sclat. P. Z. S.* 1890, p. 1, pl. 1 (Vladivostok, N.E. Asia).

Tadorna rutila × T. ægyptiaca, *Leverk. J. f. O.* 1890, p. 221.

Adult male. Head, cheeks, and chin buff-colour, darkening to an orange-brown at the lower part of the neck, which is surrounded by a black ring; back, scapulars, breast, and all the underparts orange-brown or foxy-red; rump fulvous, vermiculated with black; upper tail-coverts, tail, and quills black; wing-coverts white; secondaries glossed with green and purple on the outer web, forming a speculum; tertials yellowish, tinged with foxy-red on the outer web, and on the inner with grey: bill, legs, and feet blackish; iris brown-hazel. Total length about 24 inches, wing 14·5, tail 5·5, culmen 1·75; tarsus 2·25.

Female. Similar to the male, but the head is whiter, the black collar round the neck is wanting, and the coloration lighter.

According to Hume and others, the adult males also are without the black collar during the months of December, January, and February.

Young. Resembles the female, but is duller in colour; the tertials and scapulars are brown, marked with yellowish red, and the white on the wings is washed or soiled with grey (*Dresser*).

Nestling in down. Resembles those of the Common Sheldrake, but the brown of the upper parts is paler, and the white of the underparts is suffused with brown on the breast and belly (*Seebohm*).

Hab. Southern and Eastern Europe (being rarer in the West), North Africa as far south as Shoa, and through Western Asia, Turkestan, and Mongolia to China and Japan; winters in India, Burma, and Formosa.

a. Pull. st.	No locality.	Purchased.
b. ♂ ad. st.	Athens.	C. L. W. Merlin, Esq. [P.].
c. [♀ ad.] sk.	Egypt, Feb. (*G. E. S.*).	Shelley Coll.
d. ♂ ad. sk.	Damietta, Egypt, Dec. (*Filipponi*).	Shelley Coll.
e. ♂ ad. st.	[Cape.]	Dr. O. Finsch [P.].
f. Juv. st.	Northern Asia?	Purchased.

g. Imm. sk.	Aden.	C. Chevalier, Esq. [P.].
h. Ad. sk.	Babylon (*Jones*).	India Museum [P.].
i, k. ♂ ad. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
l. ♂ ad. sk.	Bushire, Persian Gulf, March.	W. D. Cumming, Esq. [P.].
m, n. ♂ ♀ ad. sk.	Kandahar, March.	Colonel Swinhoe [P.].
o. ♀ juv. sk.	Yarkand, June (*J. Scully*).	Hume Coll.
p. ♂ ad. sk.	Turkestan, May (*Graf Waldburg*).	Dr. O. Finsch [P.].
q, r. ♂ ad. et ad. sk.	Saiar Mts.	St. G. Littledale, Esq. [P.].
s, t. ♂ ad. sk.	Lob-nor (*Prjevalsky*).	Seebohm Coll.
u. ♀ ad. sk.	Chuan-che supr. (*Prjevalsky*).	Seebohm Coll.
v. Ad. st.	India.	Major-Gen. Hardwicke Bequest.
w. ♂ ad. sk.	India.	Purchased.
x, y. Ad. st.	N. India.	Col. Cobb [C.].
z–*c'*. ♂ ad. et juv.	Ladak (*Strachey*).	India Museum [P.].
d'. Ad. sk.	Sukkur, Sindh.	India Museum [P.].
e'. ♀ ad. sk.	Jheelum, Nov.	Hume Coll.
f'. ♀ ad. sk.	Chenab below Mooltan, Dec.	Hume Coll.
g'. Ad. sk.	Murdan, March.	Hume Coll.
h'–*n'*. ♂ ♀ ad. et ♂ imm. sk.	Gurgaon, Delhi, Jan., Feb. (*W. N. Chill*).	Hume Coll.
o', p', q'. ♂ ad. et juv. sk.	Etawah.	Hume Coll.
r'–*a''*. ♂ ♀ ad. sk.	Allahabad, Feb., March, Nov. (*A. O. H.*).	Hume Coll.
b'', c'', d''. Ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
e''. ♂ ad. sk.	Oudh, Jan.	Hume Coll.
f''. ♂ ad. sk.	Unao, Jan. (*G. Reid*).	Hume Coll.
g''. ♂ ad. sk.	Sultanpore, Oudh, Feb.	Hume Coll.
h'', i''. Ad. et imm. sk.	Nepal.	Tweeddale Coll.
k'', l''. Ad. sk. et imm. st.	Nepal.	B. H. Hodgson, Esq. [P.].
m''. Ad. sk.	Nepal (*Hodgson*).	India Museum [P.].
n''. Ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
o''. ♀ ad. sk.	Interior of Nat. Sikhim, May (*L. Mandelli*).	Hume Coll.
p''. ♂ ad. sk.	Native Sikhim, May (*L. M.*).	Hume Coll.
q''. ♀ ad. sk.	Sikhim, Oct. (*L. M.*).	Hume Coll.
r'', s''. Ad. sk.	Calcutta, March.	Hume Coll.
t''. ♀ ad. sk.	Raipur, Feb.	Hume Coll.
u''. ♂ ad. sk.	Deccan (*Sykes*).	India Museum [P.].
v''. ♂ ad. sk.	Boulay, Upper Pegu, Nov.	E. W. Oates, Esq. [C.].
w'', x''. Ad. sk.	Kiukiang, China, Nov.	F. W. Styan, Esq. [P.].
y''. Ad. sk.	Kiukiang, China, Nov. (*F. W. Styan*).	Seebohm Coll.
z'', a^{3}. ♂ ad. et ad. sk.	Hankow, China.	C. Maries, Esq. [C.].
b^{3}. ♂ ad. sk.	Shanghai, China, Jan. (*A. Michie*).	Seebohm Coll.

c^3. ♀ ad. sk.	Corea.	C. W. Campbell, Esq. [P.].
d^3. Skeleton.		Zool. Soc.
e^3. Skeleton.	Volga.	Brandt Coll.
f^3. Imperfect skel.	Nepal.	B. H. Hodgson, Esq. [P.].

HYBRIDS.

Casarca rutila × *C. cana.*

g^3. Ad. sk.	Zool. Soc.

2. Casarca cana.

Grey-headed Duck, *Brown, Ill.* pp. 102, 104, pls. 41, 42 (Cape of Good Hope) (1776); *Lath. Syn. Suppl.* i. p. 273 (1787).

Oie Sauvage à tête grise de la Côte de Coromandel (!), *Sonn. Voy. aux Ind.* ii. p. 220 (1782).

Grey-headed Goose, *Lath. Syn.* iii. 2, p. 458, n. 19 (1785).

Anas cana, *Gm. S. N.* i. 2, p. 510, n. 66 (1788); *Lath. Ind. Orn.* ii. p. 840, n. 22 (1790); *Less. Tr. d'Orn.* p. 633 (var.) (1831); *Licht. Forster's Descr. An.* p. 44 (note) (1844); *Schleg. Mus. P.-B.*, Anseres, p. 67 (1866); *Gieb. Thes. Orn.* i. p. 346 (syn. emend.) (1872); *Danf. & Harvie-Brown, Ibis*, 1875, p. 430.

Anas ægyptiaca β, *Lath. Ind. Orn.* ii. p. 840 (part.) (1790).

Anser ferrugineus, *Bonn. Enc. Méth.* i. p. 116, pl. 30. f. 2 (1790) (*ex Brown*).

Anser canus, *Vieill. N. D.* xxiii. p. 346 (1818).

Bernicla cana, *Steph. Gen. Zool.* xii. 2, p. 61 (1824).

Kasarka du Cap de Bonne Espérance, *Lafr. Mag. de Zool., Ois.* 1834, in the text of pl. 36.

Chenalopex cana, *Eyt. Mon. Anat.* p. 104 (1838); *id. Syn. Anat.* p. 54 (1869).

Anas montana, *Forst.* (*nec Gm.* ?) *Icon. ined.* 69, 70; *id. Descr. An.* (*ed. Licht.*), p. 44 (1844) (Cape of Good Hope).

Casarca rutila, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 132 (1844); *Layard* (*nec Pall.*), *Birds S. Afr.* p. 350 (1867); *Holub, Beitr. Orn. Südafr.* p. 329 (1882).

Bernicla inornata, part., *G. R. Gr. Gen. B.* iii. p. 607, n. 6 (1844).

Casarca cana, *Blyth, J. A. S. B.* xvii. p. 254 (1848); *id. Cat. B. Mus. A. S. B.* p. 302, n. 1767 (1849); *G. R. Gr. Gen. B.* App. p. 27 (1849); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 49 (1856); *Sclat. P. Z. S.* 1859, p. 442; *Salv. Ibis*, 1859, p. 362; *Gurn. Ibis*, 1868, p. 262: *Ayres, Ibis*, 1871, p. 266 (Transvaal); *G. R. Gr. Hand-list*, iii. p. 80, n. 10624 (1871); *Sharpe, Layard's Birds S. Afr.* p. 753 (1884); *Ayres, Ibis*, 1885, p. 350 (Transvaal); *Symonds, Ibis*, 1887, p. 335 (Orange Free State).

Tadorna cana, *Sclat. P. Z. S.* 1864, p. 190, 1869, p. 629 (breeding), 1880, p. 512; *Salv. Cat. B. Strickl. Coll.* p. 532 (1882); *Sclat. List Vert. An.* 8th ed. p. 429 (1883); *Hartert, Kat. Vogelsamml.* p. 228 (1891).

Vulpanser cana, *Rchnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 62 (1882).

Tadorna rubida (*errore*), *Sharpe, Layard's Birds S. Afr.* p. 753 (in the synonymy) (1884).

Nettalopex cana, *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 343 (1890).

Hybrids.

Tadorna vulpanser ♂ × Casarca cana ♀, *Sclat. P. Z. S.* 1859, p. 442, pl. clviii.; *id. Ibis*, 1859, p. 414; *id. List Vert. An.* 8th ed. p. 428 (1883).

Tadorna vulpanser ♂ × Tadorna cana ♀, *A. Newt. Ibis*, 1868, p. 226.

Adult male. Head and neck ash-coloured; a dark rufous collar round the neck; lower part of the neck and breast fulvous, changing into cinnamon-colour on the upper back, scapulars, and underparts; the lower abdomen almost chestnut; under tail-coverts bright fulvous; back and scapulars vermiculated with black; lower back blackish, with pale vermiculations; upper tail-coverts and tail black; lower flanks blackish, with fulvous vermiculations; upper and under wing-coverts white; primaries, bastard-wing, and primary-coverts black, secondaries glossy green on the outer web, forming a speculum; inner secondaries cinnamon on the outer web, dark grey on the inner one; greater under wing-coverts blackish; beak and feet black. Total length about 22 inches, wing 14, tail 5·5, culmen 1·8, tarsus 2.

Female. Similar to the male, from which it differs in having the anterior part of the head, the sides of the head above the ear-coverts, and the throat white; size somewhat smaller.

Young male. Paler and duller than the adult bird; the head and upper part of the neck dull greyish brown.

Hab. South Africa, as far north as Transvaal and Orange Free State.

a, b. ♀ ad. et juv. st.	South Africa.	Sir A. Smith [C.].
c, d. ♂ ♀ ad. sk.	Transvaal (*T. Ayres*).	Shelley Coll.
e. ♂ ad. sk.	Potschefstroom, July (*T. Ayres*).	J. H. Gurney, Esq. [P.].
f. ♀ ad. sk.	Kroonstad, March (*F. Symonds*).	J. H. Gurney, Esq. [P.].

HYBRIDS.

Tadorna cornuta ♂ × *Casarca cana* ♀.

g, h. ♂ ♀ ad. st.	Zoological Society.

Casarca cana ♂ × *C. rutila* ♀.

i. Pull. st.	Zoological Society.

3. Casarca variegata.

Variegated Goose, *Lath. Syn.* iii. 2, p. 441, n. 6 (1785) (New Zealand).

Anas variegata, *Gm. S. N.* i. 2, p. 505, n. 58 (1788); *Lath. Ind. Orn.* ii. p. 836, n. 10 (1790); *Schleg. Mus. P.-B.*, Anseres, p. 65 (1866); *Gieb. Thes. Orn.* i. p. 364 (1872).

Anser variegatus, *Bonn. Enc. Méth.* i. p. 113 (1790); *Vieill. N. D.* xxiii. p. 346 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 472 (1825).

Anas picta, *Vieill.* (*nec Gm.*) *N. D.* v. p. 132 (New Zealand) (1816) (*ex Cooke*).
Bernicla variegata, *Steph. Gen. Zool.* xii. 2, p. 59 (1824).
Casarka castanea, *Eyt. Mon. Anat.* p. 108, pl. 19 (♀) (1838); *id. Syn. Anat.* p. 59 (1869).
Anas cheneros, *Forst. Icon. ined.* t. 67; *id. Descr. An.* (*ed. Licht.*) p. 92 (1844); *Licht. ibid.* (note) (=A. variegata, *Gm.*).
Casarca variegata, *G. R. Gr. in Dieff. Trav.* ii. App. p. 198 (1843); *id. List B. Brit. Mus.* iii. p. 133 (1844); *id. Gen. B.* iii. p. 613, n. 3 (1845); *G. R. Gr. Zool. Ereb. & Terror, Birds,* p. 15, pl. 16 (♂) (1846); *Rchnb. Syn. Av.,* Natatores, p. 94. f. 2351 (*ex Ereb. & Terror*) (1850); *Licht. Nomencl. Av.* p. 101 (1854); *Haast, Report,* p. 136 (1861); *id. Ibis,* 1862, p. 101; *G. R. Gr. Ibis,* 1862, p. 240; *Layard, Ibis,* 1863, p. 245; *Buller, Essay Orn. N. Zeal.* p. 18 (1865); *Hector, New Zeal. Exh.* p. 277 (1865); *Finsch, J. f. O.* 1867, p. 336, 1870, p. 356; *Potts, Tr. & Pr. N. Z. Inst.* ii. (1869) p. 71 (1871); *Hutton, Ibis,* 1870, p. 398 (Auckland); *id. Cat. B. New Zeal.* p. 35 (1871); *G. R. Gr. Hand-list,* iii. p. 80, n. 10623 (1871); *Travers, Tr. & Pr. N. Z. Inst.* iv. (1871) pp. 206, 207 (1872); *Finsch, J. f. O.* 1872, p. 184; *Potts, Tr. & Pr. N. Z. Inst.* v. p. 199 (1873); *Buller, Hist. B. New Zeal.* p. 241, pl. 25 (♂ ♀) (1873); *Harvie Brown, Ibis,* 1874, p. 96 (egg); *Finsch, J. f. O.* 1874, p. 202; *Sharpe, Zool. Ereb. & Terr., Birds,* App. p. 31 (1875); *Buller, Man. B. New Zeal.* p. 67, pl. xxix. (1882); *Finsch, Ibis,* 1882, pp. 400, 401; ? *Layard, ibid.* p. 542 (New Caledonia); *Buller, Hist. B. New Zeal.* 2nd ed. ii. p. 264, pl. xliii. (1888); *Tristr. Cat. Coll. B.* p. 50 (1889); *Smith, Trans. & Pr. N. Z. Inst.* xxi. 1888, p. 222 (1889); *Buller, Trans. & Pr. N. Z. Inst.* xxv. 1892, p. 63 (1893).
Casarca castanea, *Bp. Compt. Rend.* xliii. p. 649, n. 48 (1856).
Anser variegata, *Ellman, Zool.* 1861, p. 7471.
Tadorna variegata, *Sclat. P. Z. S.* 1864, p. 191, pl. xix, 1866, pp. 78, 149, 1869, p. 629, 1880, p. 512; *id. List Vert. An.* 8th ed. p. 429 (1883); *Rogeron, Bull. Soc. Acclim.* 1885, pp. 151–173; *Sclat. Ibis,* 1888, p. 410 (note); *Hartert, Kat. Vogelsamml.* p. 228 (1891).
Vulpanser variegata, *Rchnw. Orn. Centralbl.* 1882, p. 36; *id. Vög. zool. Gärt.* p. 62 (1882).
Nettalopex variegata, *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 343 (1890).

Adult male. Head and upper part of the neck glossy black; back, scapulars, breast, and sides black, waved and freckled with narrow grey lines and points; upper tail-coverts deep black; middle of the abdomen chestnut-brown, waved across with black lines; under tail-coverts pure rich chestnut; upper and under wing-coverts, with the axillaries, white; primaries black; secondaries shining green on the outer web, forming a bright speculum; tertials have the outer web chestnut, becoming paler towards the tips, and their inner webs dark cinereous, freckled with grey; tail black: "irides and bill black; feet greyish black" (*Buller*). Total length about 24 inches, wing 14·5, tail 6, culmen 1·7, tarsus 2·6.

Adult female. Head and upper part of the neck pure white; lower part of the neck, back, scapulars, breast, and abdomen chest-

nut, more or less waved and freckled with black and white lines; remainder as in the male. Size somewhat less.

Young. "In the young stage the sexes are alike, the plumage resembling more nearly that of the adult male. Head and upper portion of neck sooty black, varied with light brown; lower portion of neck dark brown, with narrow transverse lines of rufous; the whole of the under surface blackish brown, mottled and barred with rufous, each feather narrowly margined with white; shoulders, back, and lower sides of the body black, with white freckles and vermiculations; wings as in the adult; rump and tail black; under tail-coverts pale ferruginous" (*Buller*).

Young males have a tinge of brown about the head, and the feathers of the shoulders more or less margined with dull fulvous brown, presenting on the surface wavy lines (*Buller*).

Young females show irregular white feathers on the head and neck, which rapidly increase in number, till the plumage of those parts becomes entirely white (*Buller*).

Young in down. Upper half of the head, a band along the nape, mantle, and anterior part of the wings, a band along the back, and two patches on the flanks brown; lower half of the head, lower parts, posterior half of the wings (except at the tip), and a band on each side of the back and rump white.

Hab. New Zealand (it has straggled to Brisbane?).

a, b. ♂ ♀ ad. st.	New Zealand.	New Zealand Coll. [P.].
c, d. ♂ ♀ ad. st.	New Zealand.	P. Earl, Esq. [C.].
e, f. ♂ ♀ ad. st.	New Zealand.	Capt. Stokes [P.].
g, h. ♂ ♀ ad. sk.	Otago, July.	Hume Coll.
i. ♂ ad. sk.	[Brisbane, July] (*Cockerell & Thorpe*).	Salvin-Godman Coll
k. Pull. st.		Zool. Soc.

4. Casarca tadornoides.

New Holland Shieldrake, *Lath. Gen. Hist.* x. p. 306 (1824).

Anas tadornoides, *Jard. & Selby, Ill. Orn.* ii. pl. lxii. (1828); *Lafr. Mag. Zool., Ois.* 1834, text to pl. 23; *Less. Compl. de Buff., Ois.* ix. p. 534 (1837); *id. op. cit.* 2nd ed. p. 721 (1838); *Schleg. Mus. P.-B.*, Anseres, p. 65 (1866); *Gieb. Thes. Orn.* i. p. 364 (1872).

Anas kasarkoides, *Lafr. Mag. de Zool.* 1834, text to pl. 36.

Casarka todornoides, *Eyt. Mon. Anat.* p. 107 (1838); *id. Syn. Anat.* p. 58 (1869).

Casarca tadornoides, *Gould, B. Austr.* v. pl. 7 (pt. xiv., 1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 133 (1844); *id. Gen. B.* iii. p. 613, n. 2 (1845); *Rchnb. Syn. Av.*, Natatores, t. 93. ff. 428–430 (1845); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 47 (1856); *Sclat. P. Z. S.* 1862, p. 185; *Gould, Handb. B. Austr.* ii. p. 361 (1865); *G. R. Gr. Hand-list*, iii. p. 80, n. 10622 (1871); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 195, 219 (1876), ii. p. 200, n. 653 (1878); *id. Tab. List*, p. 22, n. 664 (1888); *Blaauw, Ibis*, 1894, p. 317 (double moult).

Tadorna tadornoides, *Hartl. Verz. Ges. Mus.* p. 118 (1844); *Sclat.*

P. Z. S. 1864, p. 191, pl. xviii., 1880, p. 512; *id. List Vert. An.* 8th ed. p. 429 (1883); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Tristr. Cat. Coll. B.* p. 59 (1889); *Hartert, Kat. Vogelsamml.* p. 228 (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 298 (1891).

Vulpanser tadornoides, *Rchnw. Orn. Centralbl.* 1882, p. 35; *id. Vög. zool. Gärt.* p. 62 (1882).

Nettalopex tadornina, *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 343 (1890).

Adult male. Head and upper part of the neck glossy dark green; a white ring separates the upper part of the neck from the lower part, which, together with the upper part of the back and breast, are of a bright foxy-red; back, scapulars, and lower parts black, finely freckled and waved with fulvous; upper and under tail-coverts and tail black, glossed with green; wing-coverts pure white; primaries and primary-coverts black; secondaries with a glossy green speculum; tertiaries rich chestnut on their outer web and dark grey on their inner webs: "irides dark brown; bill black; legs greyish black" (*Gould*). Total length about 24 inches, wing 14, tail 6, culmen 1·8, tarsus 2·25.

Female. Smaller and duller than the male; head and upper part of the neck brown-black; a ring of white or mottled feathers surrounds the base of the bill.

According to F. E. Blaauw, this bird is subject to a double moult. "In May the first moult takes place of all the feathers, primaries and tail-feathers included. The rich shining chestnut feathers of the breast are then replaced by dull yellowish-brown feathers, and the white neck-collar is replaced by another collar, also white, but not so clearly defined, and not nearly so pure in colour." Mr. Blaauw calls this the winter dress.

"At the end of August generally, the second moult (of the small feathers only) begins and produces the breeding-dress. The dull yellowish breast-feathers are then shed and replaced by the bright chestnut-coloured ones, while the shining white neck-collar is also regained. These bright feathers also seem to have a different structure from those of the winter dress, being much more silky and hairy in appearance."

Hab. Southern and Western Australia, and Tasmania.

a–d. ♂ ♀ ad. sk.	Australia (*Cockerell & Thorpe*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. st.	N. S. Wales.	Australian Museum [E.].
g. ♂ ad. st.	S. Australia.	Sir G. Grey [P.].
h. ♂ ad. sk.	Tasmania.	Victoria Museum [P.].
i. ♀ ad. st.	Tasmania.	Gould Coll.
k. Skeleton.	S. Australia.	

27. ANAS.

	Type.
Anas, *Linn. S. N.* i. p. 134 (1766)	A. boscas.
Anassus, *Rafin. Analyse*, p. 72 (1815).	
Boschas, *Sw. Fauna Bor.-Amer., Birds*, p. 442 (1831) ..	A. boscas.

Range. Cosmopolitan.

Key to the Species.

a. Central tail-feathers curled up.
  a'. No white ring round the eyes.
    a''. Speculum purple-blue; under tail-coverts in full-plumaged males velvety black..... *boscas*, p. 189.
    b''. Speculum greenish blue; under tail-coverts (in full-plumaged males?) black, more or less mixed with chestnut ..... *wyvilliana*, p. 196.
  b'. A ring of white feathers round the eyes.. *laysanensis*, p. 199.
b. Central tail-feathers not curled up.
  c'. Wing-speculum purple, green, or blue.
    c''. No transverse white bands across the tail.
      c'''. Bill greenish olive or yellowish, but not yellow with a distinct longitudinal black patch on the culmen.
        c^4. Outer web of tertials not white.
          c^5. No very distinct black band through the eyes, but sometimes only an obsolete one.
            c^6. Throat and cheeks thickly streaked with brown; no white band anteriorly to the speculum.
              c^7. Speculum metallic green .. *melleri*, p. 199.
              d^7. Speculum dark violet; general colour very dark.. *obscura*, p. 200.
            d^6. Throat usually not streaked with brown; the light part of the plumage more or less rufescent.
              e^7. No white subapical band on the last row of the upper wing-coverts; speculum bluish green or greenish blue.
                e^8. Secondaries with no white band at the tip, or with a very narrow one .... *fulvigula*, p. 202. / *maculosa*, p. 203.
                f^8. Secondaries with a very distinct white band, about 0·35 inch broad, at the tip ..... *aberti*, p. 204.
              f^7. A white subapical band on the last row of the upper

wing-coverts, quite distinct.

g^8. Speculum purple-blue or violet ..... *boscas* ♀, p. 189.

h^8. Speculum greenish blue or bluish green ..... *wyvilliana* ♀, p. 196.

i^8. Speculum green ..... *diazi*, p. 204.

d^5. A very distinct black band through the eyes.

e^6. Sides of the head and neck rufous; plumage almost uniform brown-grey ..... *luzonica*, p. 205.

f^6. Sides of the head and neck not rufous; general plumage distinctly mottled; speculum metallic green; no white band anteriorly to the speculum ..... *superciliosa*, p. 206.

d^4. Outer web of tertials more or less broadly white; terminal portion of the upper mandible yellow.

e^5. Speculum metallic green; a broad white subapical band on the last row of the upper wing-coverts, anteriorly to the speculum; mandible at the forehead red; breast white, with conspicuous black round spots; the whole of the outer web of tertials white ..... *pœcilorhyncha*, p. 209.

f^5. Speculum metallic blue, more or less with a greenish lustre; no white band anteriorly to the speculum; no red spots at the base of bill; feathers of the breast brown, but not conspicuously spotted on a white ground; only the apical portion of the outer web of the tertials white ..... *zonorhyncha*, p. 211.

d'''. Bill yellow, with a distinct longitudinal black patch on the culmen; speculum green ..... *undulata*, p. 212.

d''. Conspicuous white bars across the tail, upper tail-coverts, scapulars, and tertials ..... *sparsa*, p. 213.

d'. Wing-speculum coppery-red.

e''. Tail moderate; a broad white patch between the bill and the eyes ..... *specularis*, p. 215.

f''. Tail rather long, approaching that of *Dafila*; nape with a pendent crest; no white patch between the bill and the eyes (not typical) ..... *cristata*, p. 216.*

* The short diagnosis of the following species, published by me, was taken from a female bird; but having since examined immature males in the Paris Museum, I find that their central tail-feathers have a tendency to curl up,

1. Anas boscas.

Common Duck.

Anas fera, *Briss. Orn.* vi. p. 318 (1760); *Leach, Cat. M. & B. Br. Mus.* p. 38 (1816).

Anas domestica, *Briss. Orn.* vi. p. 308 (1760); *Gm. S. N.* i. 2, p. 538, n. 113 (1788); *Dum. Dict. Sc. Nat.* vi. p. 364 (1817); *Brehm, Vög. Deutschl.* p. 866 (1831).

Anas rostro incurvo, *Briss. Orn.* vi. p. 311 (1760).

Anas boschas, *Linn. S. N.* i. p. 205, n. 40 (1766); *Scop. Ann. I. Hist. Nat.* p. 63, n. 77 (1769); *Forst. Philos. Trans.* lxii. p. 383 (1772); *Gm. S. N.* i. 2, p. 538, n. 40 (1788); *Lath. Ind. Orn.* ii. p. 850, n. 49 (1790); *Bonn. Enc. Méth.* i. p. 142 (1790); *Lath. Trans. Linn. Soc.* iv. p. 112, pl. xiii. f. 10 (trachea) (1798); *Pallas, Zoogr. Rosso-As.* ii. p. 255 (1811); *Wils. Am. Orn.* viii. p. 112, pl. 70. f. 7 (1814); *Temm. Man.* p. 537 (1815); *Vieill. N. D.* v. p. 138 (1816); *Dum. Dict. Sc. Nat.* vi. p. 356 (1817); *Temm. Man.* 2nd ed. ii. p. 835 (1820); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 84 (1823); *Steph. Gen. Zool.* xii. 2, p. 84 (1824); *Bp. Obs. Nomencl. Wils.* n. 256 (1825); *Ranz. Elem. di Zool.* iii. pt. ix. p. 100 (1826); *Bp. Syn.* p. 383 (1828); *Licht. Preis-Verz.* p. iii, n. 157 (Mexico) (1830); *Brehm, Isis*, 1830, p. 992; *Less. Tr. d'Orn.* p. 634 (1831); *Savi, Orn. Tosc.* iii. p. 161 (1831); *Wagl. Isis*, 1831, p. 532 (Mexico); *Ménétr. Cat. Rais.* p. 57 (Bakou) (1832); *Aud. Orn. Biogr.* iii. p. 164, pl. 221 (1835); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.* pl. 361 (1837); *Bp. Comp. List*, p. 56 (1838); *Eyt. Mon. Anat.* p. 140, pl. 11 (skeleton & trachea) (1838); *Fras. P. Z. S.* 1839, p. 134 (Erzeroum); *Aud. Syn.* p. 276 (1839); *Vig. Zool. Beech. Voy.* p. 30 (1839); *Temm. Man.* iv. p. 531 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxv, 227 (1840); *Macgill. Man.* ii. p. 165 (1842); *Selys-Long. Faun. Belge*, i. p. 140 (1842); *Naum. Vög. Deutschl.* xi. p. 575, Taf. 300 (1842); *Aud. B. Am.* vi. p. 236, pl. 385 (1843); *DeKay, N. Y. Zool.* ii. p. 347 (1844); *Giraud, B. Long Isl.* p. 299 (1844); *Schleg. Rev. Crit.* p. cxiii (1844) *Hartl. Verz. Ges. Mus.* p. 119 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 135 (1844); *id. Gen. B.* iii. p. 615, n. 1 (1845); *Rüpp.*

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showing some relation to *A. boscas*; besides, the mottling of the head and of the upper parts shows great likeness to *A. boscas*, with which the adult birds from the Marianne Islands, when available, will have to be compared. One of the specimens is very similar to the type of "*A. boschas* a. *freycineti*"; this is labelled as from "Malouines Islands," but, according to M. Oustalet, it may have come from the Marianne Islands.

ANAS OUSTALETI.

? Anas boschas a. freycineti, *Bp. Compt. Rend.* xliii. p. 649 (1856) (nomen nudum).

Anas oustaleti, *Salvad. Bull. Brit. Orn. Club*, n. xx. p. 1 (Marianne Is.) (1894).

Female. Similar to *A. superciliosa*, but differs in being paler underneath, in having less defined dusky bands on the sides of the head (one through the lores and the eyes backwards, and the other through the cheeks), the light part of the cheeks redder and generally spotted, and the speculum bluish purple, while in *A. superciliosa* it is pure metallic green; besides anteriorly to the speculum there is a sufficiently distinct white band near the tip of the greater wing-coverts, which is wanting in *A. superciliosa*. (*Mus. Paris.*)

Hab. Marianne or Ladrone Islands (Guaham).

Syst. Uebers. p. 138, n. 497 (Abyssinia) (1845); *Rchnb. Syn. Av.*, Natatores, t. 84. ff. 199–202 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 145 (1846); *Gosse, B. Jam.* p. 408 (1847); *Peale, U.S. Expl. Exp.* no. 163 (1848); *Degl. Orn. Eur.* ii. p. 425 (1849); *Blyth, Cat. B. Mus. A. S. B.* p. 303, n. 1771 (1849); *T. & S. Faun. Jap., Aves*, p. 126 (1850); *Harcourt, P. Z. S.* 1851, p. 146 (Madeira); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Hartl. Arch. f. Naturg.* 1852, i. p. 122; *Woodh. Sitgr. Rep.* p. 103 (1853); *Midd. Sibir. Reis.* ii. 2, p. 229 (1853); *Wallengr. Naumannia*, 1854, p. 270 (Scandinavia); *Licht. Nomencl. Av.* p. 101 (Arabia, Mexico) (1854); *Bolle, J. f. O.* 1855, p. 179 (Canaries); *Ep. Compt. Rend.* xliii. p. 649, n. 64 (1856); *Newb. P. R. R. Rep.* vi. p. 102 (1857); *Cab. J. f. O.* 1857, p. 229 (Cuba); *Cass. U.S. Expl. Exp., Mamm. and Orn.* p. 340 (Oregon, California, Philippines) (1858); *Kittl. Denkw.* ii. p. 294 (1858); *Adams, P. Z. S.* 1858, p. 516; *Murr. New Edinb. Phil. Journ.* 1859, p. 229 (Hudson's Bay); *Adams, P. Z. S.* 1859, p. 190; *Baird, B. N. Am.* p. 774 (1858); *id. Cat. B. N. Am.* n. 576 (1859); *Bryant, Pr. Bost. Soc. N. H.* viii. p. 122 (Bahamas) (1859); *Brewer, ibid.* p. 308 (Cuba) (1860); *Flower, P. Z. S.* 1860, p. 333 (gizzard); *Coop. & Suckl. N. H. Wash. Terr.* p. 253 (1860); *Schrenck, Vög. Amurl.* p. 472 (1860); *Reinh. Ibis*, 1861, p. 13 (Greenland); *Swinh. Ibis*, 1861, p. 344 (N. China); *Coues, Pr. Ac. Philad.* 1861, p. 238; *Swinh. Ibis*, 1862, p. 254; *Blakist. Ibis*, 1862, p. 332 (Japan); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Ross, Canad. Nat.* vii. p. 152 (McKenzie R.) (1862); *id. Nat. Hist. Rev.* (2) ii. p. 287 (1862); *Hayd. Rep.* p. 175 (1862); *Licht. J. f. O.* 1863, p. 59, n. 151 (Mexico); *G. R. Gr. List Br. B.* p. 193 (1863); *id. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Swinh. P. Z. S.* 1863, p. 324 (China); *id. Ibis*, 1863, p. 434 (Formosa); *Radde, Reis. S. O.-Sibir.* ii. p. 363 (1863); *March, Pr. Ac. Philad.* 1864, p. 72 (Jamaica); *Jerd. B. of Ind.* iii. p. 398 (N. India) (1864); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *Lawr. Ann. Lyc. N. Y.* viii. p. 13 (Panama) (1865); *More, Ibis*, 1865, p. 443 (Great Brit.); *Godm. Ibis*, 1866, p. 102 (Azores); *Schleg. Mus. P.-B.*, Anseres, p. 40 (1866); *Coues, Pr. Ac. Philad.* 1866, p. 98; *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 388 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 506 (1867); *Lawr. Ann. Lyc. N. Y.* viii. p. 13 (Panama!), p. 296 (Long Isl.) (1868); *Coues, Pr. Ess. Inst.* 1868, p. 298; *Dyb. & Parr. J. f. O.* 1868, p. 338 (Dauria); *Dall & Bann. Tr. Chic. Acad.* i. p. 296 (1869); *Eyt. Syn. Anat.* p. 97 (1869); *Dole, Pr. Bost. Soc. N. H.* xii. p. 305 (Sandwich Is., naturalized in all the Islands of the group) (1869); *Stev. U.S. Geol. Surv. Terr.* p. 466 (1870); *Przew. Putesh. Ussur.* n. 197 (1870); *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 445 (1871); *G. R. Gr. Handlist*, iii. p. 82, n. 10638 (1871); *Swinh. P. Z. S.* 1871, p. 417; *Sund. Meth. nat. Av. disp. Tent.* pp. 147, 148 (1872); *Merr. U.S. Geol. Surv. Terr.* p. 703 (1872); *Gieb. Thes. Orn.* i. p. 345 (1872); *Shell. B. of Egypt*, p. 283 (1872); *Coues, Key*, p. 285 (1872); *id. Check-list*, n. 488 (1873); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 5 (1873); *Hume, Nests and Eggs*, p. 642 (Cashmere) (1873); *id. Str. Feath.* i. p. 261 (N.W. India) (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1314 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Sharpe & Dress. B. of Eur.* vi. p. 469, pl. 422 (1873); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Tacz. J. f. O.* 1873, p. 109, 1874, p. 336; *Coues, B. N.-West*, p. 559 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 314 (Mexico) (1874); *Gundl. J. f. O.* 1875,

p. 378 (Cuba); *Rowl. Orn. Misc.* i. p. 117, pl. xiv. f. 2 (♀ in ♂ plumage) (1875); *Blanf. East. Pers.* ii. p. 300 (1876); *Sclat. & Salv. P. Z. S.* 1876, p. 380; *Scully, Str. Feath.* iv. p. 199 (Turkestan) (1876); *Dress. Ibis*, 1876, p. 409; *Przew. Mongolie*, ii. pp. 155, 170 (1876); *Swinh. Ibis*, 1877, p. 146 (Hakodadi); *Tacz. Orn. Faun. Vost. Sibir.* p. 69 (1877); *id. Bull. Soc. Zool. Fr.* 1877, p. 45; *David & Oust. Ois. Chine*, p. 495 (1877); *Prjev., Rowley's Orn. Misc.* iii. p. 101 (S.E. Mongolia) (1878); *Blak. & Pryer, Ibis*, 1878, p. 213; *Adams, Ibis*, 1878, p. 430 (Michalaski); *Seebh. Ibis*, 1879, p. 22 (Japan); *Hume, Str. Feath.* viii. p. 115, n. 958 (1879); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 262 (1879); *Blak. & Pryer, Tr. As. Soc. Jap.* viii. p. 183 (1880); *Cory, B. Bahama Isl.* p. 184 (1880); *Sclat. P. Z. S.* 1880, p. 516; *Elliot, Mon. Seal Isl.* p. 130 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 18; *id. Vög. zool. Gärt.* p. 50 (1882); *C. Swinh. Ibis*, 1882, p. 124 (S. Afghanistan); *Blak. & Pryer, Tr. As. Soc. Jap.* x. p. 96 (1882); *Blakist. Chrysanth.* 1883, p. 27; *Tacz. Bull. Soc. Zool. Fr.* 1883, p. 343; *Hartl. J. f. O.* 1883, p. 281 (Alaska); *Nels. Cruise 'Corwin,'* p. 95 (1883); *B., B., & R. Water-B. N. Am.* i. p. 491 (1884); *Tristr. Faun. & Flor. Palest.* p. 115 (1884); *D'Hamonv. Bull. Soc. Zool. Fr.* 1884, p. 101; *Madar. Zeitschr. d. ges. Orn.* i. p. 37 (1884); *Schiavuzzi, Mitth. orn. Ver. Wien*, 1884, p. 38 (var.); *id. Zeitschr. d. ges. Orn.* ii. p. 53, t. 5 (var.) (1885); *Zarudn. Ois. Transcasp.* p. 72 (1885); *Seebh. Hist. Br. B.* iii. p. 559, pl. 63 (egg) (1885); *Cory, List B. West Ind.* p. 30 (1885); *Turner, Auk*, 1885, p. 158; *Stejneg. Bull. U.S. Nat. Mus.* n. 29, p. 152 (Bering Is.) (1885); *Wells, List B. Grenada*, p. 10 (1886); *D'Hamonv. Bull. Soc. Zool. Fr.* 1886, p. 286; *Harting, Zoolog.* 1886, p. 229; *Turner, Contr. N. H. Alaska*, p. 131 (1886); *A. O. U. Check-list N. Am. B.* p. 114, n. 132 (1886); *Wray, P. Z. S.* 1887, pp. 348–350, pls. xxix., xxx. (wing); *Nels. Rep. N. H. Coll. in Alaska, Birds*, p. 67 (1887); *Ridgw. Man. N. Am. B.* p. 91 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Commander Is.) (1887); *Tacz. P. Z. S*, 1888, p. 460 (Corea); *White, Tr. N. Z. Inst.* xx. p. 39 (1888) (♀ in ♂ plumage); *Cory, Auk*, 1888, p. 61 (Cuba, Bahamas, Jamaica, Grenada); *id. B. W. Ind.* p. 262 (1889); *Meyer, Abb. Vogel-Skel.* Taf. cxv. (pt. xii., 1889); *Tristr. Cat. Coll. B.* p. 49 (1889); *Seebh. B. Jap. Emp.* p. 243 (1890); *Hartert, Kat. Vogelsamml.* p. 290 (1891); *Sharpe, Cat. Ost. Spec. Coll. Surg.* iii. *Aves*, p. 299 (1891); *Brandt, J. f. O.* 1891, p. 267 (Aleutian Is.); *Hatch, B. of Minnes.* p. 38 (1892); *Oust. Ois. du Turkest. etc., Nouv. Arch.* (3) vi. *Extr.* p. 97 (1894).

Anas boschas, *β*, *Linn. S. N.* i. p. 206 (1766) (=A. domestica).

Anas aduncа, *Linn. S. N.* i. p. 206, n. 41 (1766) (var. domestica); *Gm. S. N.* i. 2, p. 538, n. 41 (1788); *Pall. Zoogr. Rosso-As.* ii. p. 257 (1811); *Donovan, Br. B.* ix. pl. 218 (1828); *Less. Tr. d'Orn.* p. 634 (1831); *Jenyns, Man.* p. 234 (1835).

Anas monacha, *Scop. Ann. I. Hist. Nat.* p. 65, n. 80 (1769) (var. ?); *Gm. S. N.* i. 2, p. 516, n. 73 (1788); *Lath. Ind. Orn.* ii. p. 847, n. 40 (1790); *Bonn. Enc. Méth.* i. p. 146 (1790); *Bechst. Orn. Taschenb.* ii. p. 453 (1803); *Vieill. N. D.* v. p. 128 (1816); *Dum. Dict. Sc. Nat.* vi. p. 384 (1817); *Steph. Gen. Zool.* xii. 2, p. 107 (1824).

Anas curvirostra, *Pall. Spicil.* vi. p. 33 (1769); *Gm. S. N.* i. 2, p. 537, n. 112 (1788); *Lath. Ind. Orn.* ii. p. 852, n. 50 (1790);

Bonn. Enc. Méth. i. p. 144 (1790); *Vieill. N. D.* v. p. 107 (1816); *Dum. Dict. Sc. Nat.* vi. p. 365 (1817); *Steph. Gen. Zool.* xii. 2, p. 93 (1824); *Rchnb. Syn. Av.*, Natatores, t. 84. ff. 213–15 (1845).

Canard sauvage, *D'Aubent. Pl. Enl.* 776 (♂), 777 (♀) (1770); *Buff. Hist. Nat. Ois.* ix. p. 115, pls. 7, 8 (1783).

Anatra salvatica reale, *Ger. Stor. degl. Ucc.* v. t. 570 (♂) (1776).

Mallard, *Penn. Zool. Arct.* ii. p. 563 (1785); *Lath. Syn.* iii. 2, p. 489, n. 43 (1785).

Curved-billed Duck, *Lath. Syn.* iii. 2, p. 496, n. 44 (1785).

Anas cirrhata, *Gm. S. N.* i. 2, p. 538 (1788) (var.).

Anas persica, *Gm. ibid.* (var.).

Anas major, *Gm. t. c.* p. 539 (var.).

Anas grisea, *Gm. ibid.* (var.).

Anas nævia, *Gm. ibid.* (var.).

Anas nigra, *Gm. ibid.* (var.).

Anas boscas, *Forst. Syn. Cat. Br. B.* p. 35 (1817); *Wharton, Ibis*, 1879, p. 453 (nomen emend.); *Hume & Marsh. Game B. of Ind.* iii. p. 151, pl. 21 (1880); *Bidd. Ibis*, 1881, p. 99; *Scully, t. c.* p. 592; *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Ridgw. Nom. N. Am. B.* n. 601 (1881); *Coues, Check-list*, 2nd ed. p. 113, n. 707 (1882); *Salv. Cat. B. Strickl. Coll.* p. 533 (1882); *B. O. U. List Brit. B.* p. 125 (1883); *Sclat. List Vert. An.* 8th ed. p. 430 (1883); *Coues, Key N. Am. B.* 2nd ed. p. 691 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 358 (1884–85); *Gigl. Icon. Avif. Ital.* fasc. xxix. tav. 349 (1886); *Salvad. El. Ucc. Ital.* p. 257 (1886); *Lilf. Col. Fig. Br. B.* pt. viii. pl. — (1888); *Hume, Nests & Eggs* (*Oates ed.*), iii. p. 288 (1890); *Rchnw. J. f. O.* 1890, p. 82; *Sharpe, Sec. Yark. Miss., Aves*, p. 130 (1891); *Dub. Faun. Belg., Ois.* ii. p. 432, pl. 253 (1892); *Pleske, Mél. Biol.* xiii. p. 298 (1892); *A. Newt. Dict. of B.* p. 168 (1893).

Anas archiboschas, *Brehm, Isis*, 1830, p. 997, n. 1; *id. Vög. Deutschl.* p. 862 (1831).

Anas subboschas, *Brehm, Isis*, 1830, p. 997, n. 3; *id. Vög. Deutschl.* p. 864 (1831).

Anas conboschas, *Brehm, Isis*, 1830, p. 997, n. 4; *id. Vög. Deutschl.* p. 865 (1831).

Anas (Boschas) domestica, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 442 (1831); *Nutt. Man.* ii. p. 378 (1894).

Anas (Boschas) boschas, *Jenyns, Man.* p. 233 (1835).

Boschas domestica, *Sw. Class. B.* ii. p. 367 (1837).

Penguin Duck, *Eyt. Mon. Anat.* p. 141 (1838) (var. dom.).

Anas boschas domestica, *Rchnb. Syn. Av.* t. 84. ff. 206–212 (1845).

Boschas fera, *Denny, P. Z. S.* 1847, p. 40.

Anas major, *Brehm, Vogelf.* p. 372 (1855); *id. Naumannia*, 1855, p. 297 (E. Asia).

Anas boschas, var. pallescens, *Olph-Gall. Naumannia*, 1855, p. 402.

Hybrids.

Anas breweri, *Aud. Orn. Biogr.* iv. p. 302, pl. 338 (1838) (=A. boschas × A. strepera?); *id. Syn.* p. 277 (1839); *id. B. Amer.* vi. p. 252, pl. 387 (1843); *Rchnb. Syn. Av.*, Natatores, t. 100. f. 2771 (*ex Audubon*) (1850); *Coues, B. N.-West.* p. 560 (1874) (=A. boschas × A. strepera *or* F. vallisneria); *B., B., & R. Water-B.*

N. Amer. i. p. 491 (=A. boschas ♂ in changing plumage?), p. 495 (=A. boschas × A. obscura?).
Anas auduboni, *Bp. Comp. List*, p. 56, n. 374 (1838) (=breweri).
Anas moschato-boschas, *Rchnb. Syn. Av.*, Natatores, t. 84. f. 203 (1845).
Anas fusco-boschas, *Rchnb. ibid.* ff. 204–205 (1845).
Anas maxima, *Gosse, B. Jam.* p. 399 (1847) (=A. boschas × Cairina moschata); *Baird, B. N. Amer.* p. 774 (1858); *Sclat. P. Z. S.* 1859, p. 369 (Mexico).
Chaulelasmus streperus *a.* breweri, *Bp. Compt. Rend.* xliii. p. 650 (=C. streperus × A. boschas!) (1856).
Anas boschas × Dafila acuta, *Elliot, P. Z. S.* 1859, p. 437.
Anas boschas × Anas obscura, *A. Newt. P. Z. S.* 1860, p. 337; *Schleg. Mus. P.-B.*, Anseres, p. 41, n. 31 (1866); *Slade, Pr. U.S. Nat. Mus.* vii. p. 66 (1884).
Anas boschas × A. crecca, *Cromm. N. T. D.* ii. p. 293 (1865); *Leverk. J. f. O.* 1890, p. 227.
Anas boschas ♂ × Anas crecca ♀, *Schleg. Mus. P.-B.*, Anseres, p. 41, n. 30 (1866).
Anas boschas (domestica) × A. clypeata, *Tschusi, Zeitschr. ges. Orn.* 1885, p. 523.
? Anas boscas ♀ × A. superciliosa ♂, *White, Trans. N. Zeal. Inst.* xviii. pp. 134, 135 (1885).
Anas [domestica] labradoria × Anas parva alba (?), *Kemp. Mém. Soc. Zool. Fr.* iii. p. 109 (1890); *Leverk. J. f. O.* 1890, p. 227.
Anas boscas × A. strepera, *W. L. Sclat. P. Z. S.* 1891, p. 213.
Anas boscas ♂ × Mergus merganser ♀, *Schlüter, Orn. Jahrb.* ii. pp. 109, 110 (1891); *Tschusi, ibid.* pp. 170, 171.
Anas boschas × Anas americana, *Elliot, Auk*, 1892, p. 160.
Anas boscas × Chaulelasmus streperus, *Pavesi, Bull. Soc. Veneto-Trent. di Sc. Nat.* v. no. 3 (1893).

Adult male. Head and upper half of the neck rich glossy green; below that a narrow ring of white, not quite meeting behind; mantle and scapulars grey, more or less tinted with brown and minutely barred with brown; middle of the back dark umber-brown; rump, upper and under tail-coverts deep velvety black; upper breast deep chestnut; lower breast, sides, and abdomen greyish white, waved with narrow dark lines; wings ash-brown; wing-speculum on the secondaries glossy purple-blue, margined anteriorly and posteriorly by a black and a white band, the last row of the coverts having a subterminal white band and the tip black, and the secondaries having a subterminal black band and the tip white; tertials partly dark brown on the outer web; under wing-coverts and axillaries white; four middle tail-feathers black and recurved, remainder of the tail-feathers pale grey in the middle, edged with white: bill yellowish green, black at the tip; under mandible reddish yellow at the base; irides brown; legs and feet reddish orange. Total length about 24 inches, wing 10·50–11·50, tail 4·4, culmen 2·2, tarsus 1·85.

Adult female. General colour of the upper parts dark brown, each feather having a brownish-buff margin; the underparts are buff streaked with dark brown, except on the chin and throat, which

are immaculate; wings as in the male; tail brown, the edges of the feathers pale whitish buff.

Young in first plumage closely resembles adult female, but the male is somewhat darker in colour.

Adult male in moulting plumage resembles adult female, but is somewhat darker in colour.

Young in down has the upper parts dark brown, with nearly white spots on the wings, scapulars, and sides of the rump; the underparts are pale brown, palest on the belly, and shading into buff on the throat; it has a buff stripe over the eye, a dark brown stripe through the eye, and a dark spot at the end of the ear-coverts (*Seebohm*).

Hab. Northern Hemisphere, rarely north of the Arctic Circle; in Africa, extending from the Azores, Madeira, and Canaries on the West to Nubia and Abyssinia (*Rüppell*) on the East; in Asia, during the winter found from Arabia, through Persia and North India, to China and Japan; in America, extending southwards to Mexico, the West Indies, and Central America as far as Panama.

a. ♂ ad. st.	Europe.	Purchased.
b. Pull. st.	Orkneys, June.	Purchased.
c. ♀ ad. sk.	Firth of Forth, Nov. (*R. G. W. R.*).	Tweeddale Coll.
d. Juv. sk.	England.	Tweeddale Coll.
e. Pull. sk.	England?	Gould Coll.
f, g, h. ♀ ad. et pull. st.	Great Britain.	Purchased.
i–o. ♀ ad. et ♂ ♀ juv. sk.	Merton Hall, Norfolk, Aug., Oct.	Lord Walsingham [P.].
p. ♂ ad. st.	Cambridgeshire.	Purchased.
q, r, s. ♂ ad. et pull. sk. & st.	Avington, Feb., May.	R. Bowdler Sharpe, Esq. [P.].
t, u. ♂ ♀ ad. sk.	Devonshire.	Montagu Coll.
v–y. ♂ ♀ ad. et juv. sk.	East Sutton Park, Kent, July.	W. Berry, Esq. [P.].
z. ♂ ad. sk.	Near Vienna.	R. Bowdler Sharpe, Esq. [P.].
a'. ♂ ad. sk.	Arcachon, France, Nov.	Seebohm Coll.
b'. ♂ ad. sk.	Sueca, Valencia, Spain, Dec. (*H. Saunders*).	Seebohm Coll.
c'. ♂ ad. sk.	Egypt (*G. E. S.*).	Shelley Coll.
d'. ♀ ad. sk.	Mt. Lebanon.	S. Baroody, Esq. [P.].
e'. ♂ ad. [head].	Fao, Persian Gulf.	W. D. Cumming, Esq. [P.].
f'. ♀ ad. sk.	Valley of the Yen-e-sai, lat. 58°, Siberia, Aug. (*H. S.*).	Seebohm Coll.
g'. ♂ ad. sk.	Kansu, Feb. (*Prjevalsky*).	Seebohm Coll.
h', i'. ♂ ad. sk.	Kashgar (*Bellew*).	India Museum [P.].
k'. ♂ ad. sk.	Yarkand.	R. Bowdler Sharpe, Esq. [P.].
l'–p'. ♂ ♀ ad. sk.	Ladak (*Strachey*).	India Museum [P.].
q'–t'. ♂ ♀ ad. sk.	R. Jheelum, Nov. (*A. O. H.*).	Hume Coll.

u'. ♂ ad. sk.	Muncha Lake.	Hume Coll.
v'. ♀ ad. sk.	Larkhana, Sindh, Jan. (*A. O. H.*).	Hume Coll.
w', *x'*. ♂ ♀ ad. sk.	Sirza.	Hume Coll.
y', *z'*. ♂ ad. sk.	Near Fazilka, Nov. (*A. O. H.*).	Hume Coll.
a''. ♂ ad. sk.	Junction of Chenab & Sutledje, Dec.	Hume Coll.
b''. ♂ ad. sk.	Sultanpur, Gurgaon, Dec. (*W. N. Chill*).	Hume Coll.
c''. ♀ ad. sk.	Mungloo, Kooloo, Feb.	Hume Coll.
d'', *e''*. ♂ ad. sk.	Etawah, Jan. (*A. Anderson*).	Hume Coll.
f''. ♂ ad. sk.	Sandee, Feb. (*A. A.*).	Seebohm Coll.
g'', *h''*, *i''*. ♂ ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
k''. ♂ ad. sk.	Native Sikhim, Nov. (*L. Mandelli*).	Hume Coll.
l''. ♂ ad. sk.	Bengal (*Falconer*).	India Museum [P.].
m'', *n''*. ♂ ♀ ad. sk.	China.	J. R. Reeves, Esq. [P.].
o'', *p''*. ♂ ♀ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
q''. ♂ ad. sk.	Wuhu, Yangtse, China, Jan.	F. W. Styan, Esq. [P.].
r'' ♂ ad. sk.	Shanghai, China.	Salvin-Godman Coll.
s'', *t''*. ♂ ad. sk.	Nagasaki, Japan, Dec.	F. Ringer, Esq. [P.].
u''. ♂ ad. sk.	Hakodadi, Japan, March.	Seebohm Coll.
v''. ♂ ad. sk.	Fujisan, Japan (*H. Pryer*).	Seebohm Coll.
w''. ♂ ad. sk.	Yokohama, Japan (*H. P.*).	Seebohm Coll.
x''. ♂ ad. sk.	Western side of Rocky Mts.	J. K. Lord, Esq. [P.]
y''. ♂ juv. sk.	St. Michael's, Alaska, May (*E. W. Nelson*).	Salvin-Godman Coll
z''–*c*^{3}. ♂ ad. et juv. sk.	British Columbia (*J. K. Lord*).	N. America Boundary Comm. [P.].
d^3. ♀ pull. sk.	Washoe Lake, Nevada, May (*H. W. Henshaw*).	Salvin-Godman Coll.
e^3, *f*^{3}. ♂ ♀ ad. sk.	Canada.	Governt. of Canada [P.].
g^3, *h*^{3}. ♀ ad. et juv. sk.	Fort Dufferin.	N. America Boundary Comm. [P.].
i^3. ♂ ad. sk.	N. Land Expedition.	Sir G. Back [P.].
k^3, *l*^{3}, *m*^{3}. ♂ ♀ ad. et ♂ juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
n^3. ♂ ad. sk.	Greenland.	Hume Coll.
o^3. ♂ imm. sk.	Lake Minnesota, Oct. (*A. J. Dayan*).	Salvin-Godman Coll.
p^3, *q*^{3}. ♂ ♀ ad. sk.	Chicago, Illinois, March, Oct. (*A. J. D.*).	Salvin-Godman Coll.
r^3. ♀ ad. sk.	Hermisillo, State of Sonora, Mexico, Dec. (*F. Ferrari-Perez*).	Salvin-Godman Coll.
s^3–*a*^{4}. ♂ ♀ ad. et juv. sk.	Corpus Christi, Texas, Oct. Dec. (*F. Armstrong*).	Salvin-Godman Coll.

b^4, c^4. ♂ ♀ ad. sk.	Tarpon Springs, Florida, Nov., Dec. (*W. C. D. Scott*).	Salvin-Godman Coll.
d^4–k^4. Sterna.		
l^4–q^4. Skulls.		

Varieties.

r^4. ♀ ad. st. (malformed).	No locality.	Rev. W. Parish [P.].
s^4. Pull. sk. (domestic).	No locality.	J. H. Gurney, Esq. [P.].
t^4. ♂ ad. st. (dark).	Great Britain.	Purchased.
u^4. Ad. st. (melanistic).	Lincolnshire Fens.	J. Dashwood, Esq. [P.].
v^4. ♂ ad. sk.	Lilford Aviaries, Nov.	The Hon. Lord Lilford [P.].
w^4. Ad. sk.	Egypt.	C. Berkeley, Esq. [P.].
x^4. Ad. st.	China.	Purchased.
y^4, z^4. Ad. sk. (albino).	Amoy, China (*R. Swinhoe*).	C. Darwin, Esq. [P.].

Penguin Duck.

a^5. ♂ ad. st. (grey).	Borneo (*Rajah Brooke*).	C. Darwin, Esq. [P.].
b^5. ♀ ad. st. (buff).	Borneo (*Rajah Brooke*).	C. Darwin, Esq. [P.].
c^5. ♀ ad. st.	Bali or Lombock (*Raj. Brooke*).	C. Darwin, Esq. [P.].
d^5. Pull.		Gould Coll.
e^5. Pull.		Zool. Soc.
f^5. Skeleton (incomplete) of the malformed specimen r^4.		Rev. W. Parish [P.].
g^5. Skull.		

Hybrids.

Anas boscas × *A. superciliosa.*

h^5. ♀ ad. sk.	Lilford Aviaries.	Lord Lilford [P.].

Anas boscas × *A. flavirostris.*

i^5. ♂ imm. st.		Zool. Soc.
k^5. Sternum.		Zool. Soc.

2. Anas wyvilliana.

Duck [of the Sandwich Islands], *Bloxam, Byron's Voy.* p. 251 (1826).

Anas boschas ?, *Hartl.* (*nec Linn.*), *Wiegm. Arch. f. Naturg.* 1852, i. p. 137 (Oahu, *in Mus. Berol.*)*; *G. R. Gr. Cat. B. Trop. Isl.* p. 54 (1859) (Oahu, Sandwich Islands); ? *Cass. Pr. Ac. Philad.* 1862, p. 322 (Sandwich Islands); *Finsch & Hartl. Orn. Centralpolyn.* pp. xxxviii, xxxix, n. 138 (part.) (1867); ? *Dole, Pr. Bost. Soc. N. H.* xii. p. 305 (1869).

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* =*wyvilliana* (Reichenow in litt.).

Anas boschas, var., *Hartl. J. f. O.* 1854, p. 170 (Sandwich Isl.).
Anas superciliosa *a.* sandwichensis, *Bp. Compt. Rend.* xliii. p. 649 (1856) (*nom. nudum*).
Anas superciliosa, var. (part.), *G. R. Gr. Cat. B. Trop. Isl.* p. 54 (1859).
Anas superciliosa, *Dole* (*nec Gm.*), *Pr. Bost. Soc. N. H.* xii. p. 305 (1869) (Sandwich Isl.); *Sclat. Ibis*, 1871, p. 360; *Dole, Haw. Almanac*, 1879, p. 55; *id. B. Hawai. Isl.* 2nd ed. p. 55 (1879).
Anas sandwichensis, "*Bp.*," *Buller, B. New Zeal.* p. 245 (*in syn.* A. superciliosæ) (1873).
Anas wyvilliana, *Sclat. P. Z. S.* 1878, p. 350 (juv., Sandwich Isl.); *Ridgw. Pr. U.S. Nat. Mus.* i. p. 251 (♀) (1878); *Sclat. Ibis*, 1879, p. 92; *Finsch, Ibis*, 1880, p. 79; *Sclat. Voy. Chall., Birds*, p. 98, pl. xxii. (juv.) (1880); *id. P. Z. S.* 1880, p. 517; *Wall. Island Life*, p. 296 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 19; *Salvad. Orn. Pap. e Mol.* iii. p. 396 (note) (1882); *Stejn. Pr. U.S. Nat. Mus.* xi. p. 98 (1888); *Scott Wils. Aves Hawaiienses*, pt. iv pl. — (1893).

Besides the four specimens mentioned below, I have seen three others received for inspection from Prof. Newton, and many more, over twenty, in the Hon. W. Rothschild's collection. As observed by Dr. Stejneger, the specimens inspected show a number of extraordinary variations, truly perplexing, and I must confess that I do not quite understand this species. The most adult male bird examined in Mr. Rothschild's collection has the central tail-feathers curled up, so that this species appears to come near to *A. boscas*. Examining the series as I have done, it seems to me that perhaps not one of the specimens inspected is in full dress, and, secondly, that many of the birds have some taint of *A. boscas*, which, according to Judge Dole, is *naturalized in all the Islands*. Both these points cannot be solved at present, but we must wait for further information obtained in the Sandwich Islands.

Before proceeding to mention the principal features distinguishing *A. wyvilliana*, I wish to point out that the figure of the type of *Anas wyvilliana* (Voy. of the 'Challenger') is not very exact in the following particulars:—1st, the speculum is much too green; 2nd, the feathers of the breast have small roundish dark spots, while in the *type* there are U-shaped black submarginal bands; 3rd, the general colouring is not olive-brown, but much more rufescent.

When I was in Paris I examined in the Museum the presumed type of *A. boschas* a. *freycineti*; it is a male in moult, putting on the green feathers of the head. This bird, which is labelled as from "Les Isles Malouines," was inadvertently stated by Gray to be from the Sandwich Islands. According to the information given to me by M. Oustalet it is not at all improbable that the type of *A. boschas* a. *freycineti* came from the Marianne Islands, and if so, it would be the same as my *A. oustaleti*.

Besides the central tail-feathers being curled up in one specimen, and very little so in another, the most adult male specimens of

the "Duck from the Sandwich Islands" examined by me show the following characters:—

1. The rump and upper tail-coverts are black; also the under tail-coverts are more or less black, but mixed with chestnut in some specimens.

2. The abdomen has a greyish tinge and traces of dusky narrow cross bars.

3. The head on the upper part is blackish, glossed with green, while the sides and throat have dark streaks as in *A. obscura*; in one specimen the throat is blackish.

4. The crop-region and breast are reddish chestnut, with black markings more or less of a crescent shape, especially on the sides.

5. The feathers of the mantle and interscapular region have black and rufous-chestnut undulated bands, and many feathers, especially on the side, are finely waved with grey.

6. The speculum is glossy green, with a bluish lustre in some specimens, and is bounded anteriorly by two bands on the last row of the upper wing-coverts—one, subapical, whitish grey, and the other, apical, black; posteriorly the speculum is bounded also by two bands—a subapical one, black, and a broad apical one, white. In some specimens the anterior whitish band is almost obsolete.

7. The tertials are brown-grey, the outer ones have the outer web velvety black.

8. The upper wing-coverts are dark grey, with narrow rufescent edges.

9. The under wing-coverts are white, but in some specimens the marginal ones are dusky.

10. The size is smaller than in *A. boscas*; total length about 18 inches, wing 9·25, culmen 1·85.

11. Colour of the soft parts: bill black above, flesh-coloured below; feet orange.

The female resembles that of *A. boscas*, but is smaller, darker, and has the speculum green, the upper wing-coverts more or less with rufescent edges; the bill dusky, with a yellow band near the tip.

The young bird resembles the adult female, but has dark streaks also on the throat; the markings on the underparts are more like longitudinal streaks.

Young in down are very similar to the same stage of *A. boscas*, but perhaps the brown colour of the upper parts is more olive. (*Rothschild Coll.*)

Hab. Sandwich Islands.

a, b. ♂ moult. et ♀ ad. sk.	Hawai (*Knudsen*).	Prof. Collett [P.].
c. ♂ juv. sk.	Hilo, Owhyhee.	Voy. of H.M.S. 'Challenger.' (Type of species.)
d. ♂ jun. sk.	Hilo, Owhyhee.	Voy. of H.M.S. 'Challenger.'

3. Anas laysanensis.

Anas laysanensis, *Rothsch. Bull. B. O. C.* no. 4, p. xvii (Laysan I.) (1892); *id. Ibis*, 1893, p. 250; *id. Avif. of Laysan*, pt. i. p. 19, pl. — (1893).

Male perhaps not fully adult. General plumage rufescent; head and nape black with a greenish lustre, especially on the nape; edges of the feathers on the sides of the head streaked with reddish; an irregular white ring round the eyes; throat mixed with white; back, crop-region, breast, and flanks with brown and rufescent V-shaped marks; rump blackish, with rufescent markings; abdomen rufescent, with brown bars; under tail-coverts rufous-chestnut, with brown marks; upper wing-coverts greyish brown, edged with rufescent; speculum dull metallic purple and green, with a white apical band; tertials brown, with the outer web velvety black; under wing-coverts brown, edged with rufescent, the inner ones with the axillaries white; tail brown, the feathers edged and crossed with rufescent; the central tail-feathers much darker and somewhat curled up: "iris brown; upper mandible blackish, green towards the edges; feet dull orange, webs brown" (*Palmer*). Total length about 17 inches, wing 8, tail 3·5, culmen 1·6, tarsus 1·4. (*Mus. Rothschild.*)

Female. Similar to the male, but differs in having more white on the chin and upper throat and in the speculum being much duller, scarcely indicated; upper and under tail-coverts paler, rufescent with dusky marks or bands. (*Mus. Rothschild.*)

In some specimens the white ring round the eyes extends backwards, in a kind of band, and many white feathers are scattered on the sides of the head; again, in one female many tail-feathers are white! (*Mus. Rothschild.*)

Hab. Laysan Islands.

4. Anas melleri.

Anas xanthorhyncha, *Roch & E. Newt.* (*nec Forst.*) *Ibis*, 1863, p. 174 (Tamatave).

Dafila erythrorhyncha, *Sclat.* (*nec Gm.*) *P. Z. S.* 1863, p. 165.

Anas melleri, *Sclat. P. Z. S.* 1864, p. 487, pl. xxxiv. (Madagascar); *G. R. Gr. Hand-list*, iii. p. 82, n. 10641 (1871); *Gieb. Thes. Orn.* i. p. 357 (1872); *Hartl. Vög. Madag.* p. 360 (1877); *Sclat. P. Z. S.* 1880, p. 517; *Milne-Edw. & Grand. Ois. Madag.* p. 724, pls. 269 (bird), 275 *a.* f. 1 (head) (1882); *Rchnw. Orn. Centralbl.* 1882, p. 19; *Tristr. Cat. Coll. B.* p. 49 (1889); *Sibree, Ibis*, 1892, p. 270.

Anas morelii, *Grand. Rev. et Mag. de Zool.* 1867, pp. 88, 255 (= melleri).

Anas boschas (?), var. melleri, *Grand. Rev. et Mag. de Zool.* 1868, p. 5.

Anas boschas (?), *Schleg. & Poll. Rech. Faun. Madag.* p. 160 (1868).

Anas mascarina, *Vinson, Mém. Soc. Accl. de l'île de la Réun.* 1868, p. 5; *id. Bull. Soc. d'Acclim.* 1868, pp. 626, 627: *cf. A. Newt. Zool. Rec.* v. pp. 108, 109.

Adult. General colour reddish; the feathers brown in the middle and margined with reddish; head and neck with narrow dusky streaks, each feather margined with reddish; feathers of the back with some narrow irregular reddish bars; speculum glossy green, bounded anteriorly and posteriorly by two velvety-black bands, the anterior one at the tip of the greater wing-coverts; a narrow whitish band at the tip of the secondaries; before the anterior black band there is also a narrow dull reddish band; tertials velvety brown, darker on the outer web; under wing-coverts and axillaries white: "bill black (?); irides sienna-brown; feet fleshy colour" (*Sclater*). Total length about 21 inches, wing 10·6, tail 5, culmen 2·3, tarsus 1·65.

Female. Apparently similar to the male.

Young. Has a redder tinge, almost rusty, on the edges of the feathers of the lower parts.

Hab. Madagascar.

a. Ad. st.	Madagascar.	P. L. Sclater, Esq., [P.]. (Type of species.)
b. Ad. sk.	Madagascar (*Deans Cowan*).	Tweeddale Coll.
c. Ad. sk.	Madagascar (*Deans Cowan*).	Shelley Coll.
d. Juv. sk.	E. of Antananarivo, Madagascar.	W. Deans Cowan, Esq. [C.].
e. Ad. sk.	C. Madagascar.	Shelley Coll.
f. Ad. sk.	S.E. Madagascar.	W. Deans Cowan, Esq. [C.].

5. Anas obscura.

Dusky Duck, *Penn. Arct. Zool.* ii. p. 564, n. 496 (1785); *Lath. Syn.* iii. 2, p. 545, n. 84 (1785).

Anas obscura, *Gm. S. N.* i. 2, p. 541, n. 115 (1788); *Lath. Ind. Orn.* ii. p. 871, n. 96 (1790); *Bonn. Enc. Méth.* i. p. 146 (1790); *Wils. Am. Orn.* viii. p. 141, pl. 72. f. 5 (1814); *Vieill. N. D.* v. p. 131 (1816); *Dum. Dict. Sc. Nat.* vi. p. 386 (1817); *Steph. Gen. Zool.* xii. 2, p. 104 (1824); *Bp. Obs. Wils.* n. 260 (1825); *id. Syn.* p. 234 (1828); *Bp. Comp. List*, p. 56 (1838); *Eyt. Mon. Anat.* p. 140 (1838); *Aud. Orn. Biogr.* iv. p. 15, pl. 302 (1838); *id. Syn.* p. 276 (1839); *id. B. Am.* vi. p. 244, pl. 386 (1843); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Giraud, B. Long Isl.* p. 301 (1844); *De Kay, N. Y. Zool.* ii. p. 344 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 135 (1844); *id. Gen. B.* iii. p. 615, n. 5 (1845); *Rchnb. Syn. Av. Nat.* t. 85. f. 918 (1845), t. 100. ff. 2764–65 (*ex Audubon*) (1850); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 72 (excl. syn.) (1856); *Putn. Pr. Ess. Inst.* i. p. 219 (1856); *Baird, B. N. Am.* p. 775 (part.) (1858); *id. Cat. B. N. Am.* n. 577 (1859); *Wheat. Ohio Agr. Rep.* 1860, no. 241; *Coues & Prent. Smiths. Rep.* 1861, p. 417 (winter); *Coues, Pr. Ac. Philad.* 1861, p. 238 (Labrador, breeding); *Verr. Pr. Ess. Inst.* iii. p. 154 (Maine, breeding) (1862); *Boardm. Pr. Bost. Soc.* ix. p. 129 (Maine, resident) (1862); *Blak. Ibis*, 1863, p. 146 (Hudson Bay); *Allen, Pr. Ess. Inst.* iv. p. 78 (Massachusetts, breeding) (1864); *McIlwr. ibid.* v. p. 94 (Canada West) (1866); *Schleg. Mus. P.-B.*, Anseres, p. 41 (1866); *Lawr. Ann. Lyc. N. Y.* viii.

p. 297 (1866) ; *Coues, Pr. Ess. Inst.* v. p. 298 (1868) ; ? *id. Pr. Bost. Soc. N. H.* xii. p. 721 (South Carolina, winter) (1868) ; *Allen, Mem. Bost. Soc. N. H.* i. p. 502 (Iowa, summer) (1868) ; *Turnb. B. E. Pa.* p. 35 (1869) ; *Eyt. Syn. Anat.* p. 97 (1869) ; *Mayn. Guide*, p. 147 (Massachusetts, breeding) (1870) ; *id. Pr. Bost. Soc.* xiv. 1871, p. 384 (1872) ; ? *Coues, Pr. Acad. Philad.* 1871, p. 36 (North Carolina) ; *G. R. Gr. Hand-list*, iii. p. 82, n. 10649 (1871) ; *Gieb. Thes. Orn.* i. p. 359 (1872) ; *Coues, Key*, p. 285 (part.) (1872) ; *id. Check-list*, n. 489 (1873) ; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873) ; *Coues, Birds N.-West*, p. 560 (1874) ; *Sclat. & Salv. P. Z. S.* 1876, p. 380 ; *Sclat. P. Z. S.* 1880, p. 517 ; *Ridgw. Nom. N. Am. B.* n. 602 (1881) ; *Coues, Check-list*, 2nd ed. p. 113, n. 708 (1882) ; *Rchnw. Orn. Centralbl.* 1882, p. 18 ; *id. Vög. d. zool. Gärt.* p. 50 (1882) ; *Salv. Cat. B. Strickl. Coll.* p. 534 (1882) ; *Sclat. List Vert. An.* 8th ed. p. 430 (1883) ; *Coues, Key N. Am. B.* 2nd ed. p. 691 (1884) ; *B., B., & R. Water-B. N. Am.* i. p. 499 (1884) ; *A. O. U. Check-list*, p. 115, n. 133 (1886) ; *Ridgw. Man. N. Am. B.* p. 91 (1887) ; *Tristr. Cat. Coll. B.* p. 49 (1889) ; *Hartert, Kat. Vogelsamml.* p. 230 (1891) ; *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 300 (1891) ; *Hatch, B. of Minnes.* p. 40 (1892).

Anas boschas, var. obscura, *Less. Tr. d'Orn.* p. 634 (1831).

Anas (Boschas) obscura, *Nutt. Man.* ii. p. 392 (1834).

Adult male. Prevailing colour brownish black or dusky, the feathers edged, more or less distinctly, with pale greyish fulvous ; upper part of the head darker than the cheeks and upper part of the neck, which are greyish fulvous, streaked with dusky ; a dusky stripe back from the eye ; the chin and throat more sparingly streaked, but not immaculate ; speculum deep glossy violet, surrounded with velvety black ; before the anterior black band, formed by the last row of coverts, there is a narrow pale band almost obsolete ; at the tip of the secondaries a narrow white band ; marginal under wing-coverts dusky with white edges, the inner ones and axillaries white ; primaries and tail-feathers dusky black, the latter with narrow pale edges : "bill yellowish green, the unguis dusky ; iris dark brown ; feet orange-red, the webs dusky" (*Audubon*). Total length about 21 inches, wing 10·50–11, tail 4, culmen 2–2·35, tarsus 1·70–1·80.

"Some examples have a slight tinge of metallic green on the sides of the head, behind the eye" (*B., B., & R.*).

Female. Similar to the male.

Young in down. "Above olivaceous brown, faintly relieved by six inconspicuous markings of light brownish buff, situated as follows : one on the posterior border of each arm-wing : one (small, and sometimes nearly obsolete) on each side of the back, behind the wing, and one, more distinct, on each side of the rump, near the base of the tail ; pileum and nape (longitudinally) brown, like the back ; rest of the head and neck, with lower parts, light dingy brownish buff, paler on the abdomen ; sides of the head marked with a narrow dusky stripe running from the upper basal angle to the eye, thence back towards the occiput, but scarcely confluent with the brown on the latter ; an indistinct spot on the auricular

region, with a still less distinct dusky mark extending back from this to the nape" (*B., B., & R.*).

This species, in Mr. Ridgway's Key, comes in the section in which the wings are without white bands; but in two of the specimens mentioned below, one from New Brunswick and the other from the Bermuda Islands, there is a distinct narrow white band at the tip of the secondaries.

Hab. Eastern North America, breeding from more northern United States to Hudson's Bay and Labrador; western and southern limits imperfectly determined; Bermudas.

a. Pull. st.	No locality.	
b. Ad. st.	N. America.	Purchased.
c. Ad. st.	N. America.	J. J. Audubon, Esq. [P.].
d. ♂ ad. sk.	New Brunswick, Sept.	Capt. S. G. Reid [P.].
e. Ad. sk.	Halifax, Nova Scotia.	Capt. S. G. Reid [P.].
f. ♂ ad. sk.	New Haven, Connecticut, April (*C. A. Merriam*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Peniston's Pond, Bermudas, Jan.	Capt. S. G. Reid [P.].
h, i. Skeletons.		

6. Anas fulvigula.

Anas obscura, part., *Aud. Orn. Biogr.* iv. p. 15 (1838); *id. B. Am.* vi. p. 244 (1843); ? *Gosse, B. Jam.* p. 408 (1847); ? *Gundl.* (*nec Gm.*) *J. f. O.* 1857, p. 229 (Cuba); *March, Pr. Ac. Philad.* 1864, p. 72 (Jamaica); ? *Coues, Pr. Bost. Soc. N. H.* xii. p. 724 (South Carolina, in winter) (1868); ? *Allen, Bull. Mus. Comp. Zool.* ii. p. 363 (Florida) (1871); ? *A. & E. Newt. Handb. Jam.* p. 113 (1881); ? *Cory, Rev. List B. W. Ind.* p. 30 (1886); *id. Auk*, 1888, p. 61 (Cuba, Jamaica); ? *id. B. W. Ind.* p. 262 (1889).

Anas obscura, var. fulvigula, *Ridgw. Am. Nat.* viii. p. 111 (Florida) (1874); *Coues, Check-list*, App. n. 489 *a* (1874).

Anas obscura, *b.* fulvigula, *Coues, B. N.-West*, p. 561 (1874).

Anas fulvigula, *Ridgw. Pr. U.S. Nat. Mus.* i. p. 251 (1878), iii. p. 203, n. 603 (1880); *id. Nom. N. Am. B.* n. 603 (1881); *B., B., & R. Water-B. N. Am.* i. p. 503 (1884); ? *Cory, List B. W. Ind.* p. 30 (1885); *Ridgw. Pr. U.S. Nat. Mus.* ix. p. 173 (1886); *A. O. U. Check-list N. Am. B.* p. 115, n. 115 (1886); *Ridgw. Man. N. Am. B.* p. 92 (1887); *A. O. U. Check-list N. Am. B.* (abridg. ed.) p. 14, n. 134 (1889); *Cory, Auk*, 1890, p. 204 (eggs); ? *Brewst. & Chapm. Auk*, 1891, p. 137 (Suwanee River); *Scott, Auk*, 1892, p. 211 (Florida).

Anas obscura fulvigula, *Coues, Check-list*, 2nd ed. p. 113, n. 709 (1882); *id. Key N. Am. B.* 2nd ed. p. 692, n. 709 (1884).

Similar to *A. obscura* but much paler; cheeks and throat plain buff; ochraceous or buff markings predominating in extent over the darker markings; lower basal angle of upper mandible with a triangular black spot; speculum usually bluish green; about the size of *A. obscura*. (*Ridgway.*)

According to Ridgway's Key, this species ought to have no white bands on the wings, but the only typical bird in the Museum and others in Mr. Rothschild's collection have a distinct narrow white band at the tip of the secondaries.

The last specimen in the list below differs very conspicuously from the other two: the speculum is black with a greenish gloss, only one of the feathers shows a distinct bluish-green colour on the outer web; the upper part of the head is very *dark brown*; there is a very distinct black band from the lores through the eyes; the cheeks are *entirely covered* with blackish streaks; throat buffish, unspotted. I am not sure that it belongs to the present species. It has the appearance of being not fully adult; but in the collector's note it is said that it was sitting on 13 eggs!

Hab. Florida, and perhaps also the West Indies.

a. ♂ ad. sk.	Florida (*Henshaw Coll.*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Lake Hichpoochee, Florida, March (*F. Menge*).	Salvin-Godman Coll.
c. ♀ ad.? sk.	Lake Hichpoochee, Florida, March (*F. Menge*).	Salvin-Godman Coll.

7. Anas maculosa.

Anas obscura, part., *Baird, B. N. Am.* p. 775 (1858); *Dresser, Ibis*, 1866, p. 42 (Texas); *Coues, Key*, p. 285 (part.) (1872); *id. Check-list*, n. 489 (part.) (1873); *Snow, B. Kans.* p. 11 (1873); *Ridgw. Nom. N. Am. B.* n. 602 (part.) (1881); *Goss, Cat. B. Kans.* p. — (Kansas) (1883); *Coues, Key N. Am. B.* 2nd ed. p. 691 (part.) (1884).

Anas fulvigula, *Goss* (*nec Ridgw.*), *Auk*, 1886, p. 113 (Kansas); *id. Rev. Cat. B. Kans.* p. — (1886); *Ridgw. Man. N. Am. B.* p. 92 (part.) (1887); *id. Auk*, 1888, p. 108 (note) (Chihuahua).

Black Duck, *Emmet* (*nec auct.*), *Auk*, 1888, p. 108 (Chihuahua).

Florida Duck, *Goss* (*nec Ridgw.*), *Auk*, 1888, p. 444.

Anas maculosa, *Sennett, Auk*, 1889, p. 263 (Texas); *Goss, Auk*, 1890, p. 88 (Kansas).

Anas fulvigula maculosa, *A. O. U. Auk*, 1890, p. 61 (Eastern Texas, and north to Kansas).

In my opinion *A. maculosa* is scarcely different from *A. fulvigula*, but, according to Mr. Sennett, "the most marked differences between *A. maculosa* and *A. fulvigula* are that the cheeks of the former are streaked with brown, while those of the latter are plain buff, the speculum is purple instead of green; the general effect of the coloration, especially on the undersides, is mottled instead of streaked; the light colour everywhere is a pale buff or isabella colour instead of a rich, deep buff, and the tail-markings also are different, as indicated."

Many of the specimens mentioned below have the throat immaculate, but several have it streaked with brown.

Hab. Eastern Texas and north to Kansas.

a. Ad. sk.	San Antonio, Texas (*H. E. Dresser*).	Salvin-Godman Coll.
b–m. ♂ ♀ ad. sk.	Corpus Christi, Texas, June, Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
n. Ad. sk.	Texas (*F. B. A.*).	Salvin-Godman Coll.

8. Anas diazi.

Anas diazi, *Ridgw. Auk*, 1886, p. 332 (Puebla, Mexico); *F.-Perez, Pr. U.S. Nat. Mus.* 1886, p. 171; *Ridgw. ibid.*; *id. Man. N. Am. B.* p. 32 (1887); *id. Auk*, 1889, p. 264.

Male. Most like *A. fulvigula*, Ridgw., but last row of wing-coverts with a distinct subterminal band of white, and secondaries with a broad terminal bar of the same; general colour much less fulvous; cheeks streaked with dusky, and lower basal angle of upper mandible without black spot. Wing 10 inches, tail 4, culmen 2·05, tarsus 1·60. (*Ridgway.*)

Female. Similar, but somewhat smaller.

Hab. Mexico.

a. ♀ ad. sk. Puebla, May (*Ferrari-Perez*). Salvin-Godman Coll.

9. Anas aberti.

? Anas obscura, *Lawr.* (*nec Gm.*) *Mem. Bost. Soc. N. H.* ii. p. 314 (Tepic, W. Mexico) (1874).

Anas aberti, *Ridgw. Pr. U.S. Nat. Mus.* i. p. 250 (Mazatlan, Mexico) (1878); *B., B., & R. Water-Birds N. Am.* i. p. 490 (1884); *Ridgw. Pr. U.S. Nat. Mus.* ix. p. 173 (1886); *id. Man. N. Am. B.* p. 92 (1887).

Adult female. "Size of *Querquedula discors* and *cyanoptera*, but in coloration closely resembling *A. fulvigula*. Prevailing colour ochraceous buff, but this everywhere relieved by brownish-black spots or streaks. Head, neck, and lower parts streaked, the streaks finest on the neck and sides of the head, broadest on the jugulum and crissum, which is somewhat tinged with rusty, and assuming the form of oblong spots on the abdomen, thighs, and anal region; throat immaculate. Back, scapulars, and rump with the blackish predominating; the feathers bordered with ochreous; those of the back and the scapulars with irregular indentations and occasional bars of the same; lesser wing-coverts brownish-slate, bordered with dull earthy-brown; middle coverts with their exposed portion velvety-black, forming a distinct bar. Secondaries widely tipped with pure white (forming a conspicuous band about ·35 of an inch wide), this preceded by a velvety-black bar of about equal width, the basal half or more (of the exposed portion) consisting of a metallic speculum of dark grass-green, varying to blue and violet in certain lights. Tertials opaque velvety-black exteriorly, the inner webs brownish-slate; primary-coverts and primaries brownish-slate, the latter edged with lighter. Tail brownish grey, the feathers edged and coarsely spotted with light buff. Bill yellowish brown, darker on the culmen, the unguis dusky; feet light yellowish (probably orange in life). Wing 8·50 inches, tail 3·25, culmen 1·65, greatest width of the bill ·60, depth of maxilla through the base ·50, tarsus 1·30, middle toe 1·70.

"*Remarks.* [This Duck] in its small size and, to a certain extent, the narrow bill, is like the species of *Querquedula*, but its coloration calls instantly to mind the *Anas fulvigula* from Florida . . . .

"In addition to the characters given above, it may be mentioned that there is a distinct indication of a narrow, dusky, postocular streak, and of a wider and less distinct loral stripe, thus separating a light superciliary stripe from the light colour of the cheeks. The lining of the wing and the axillar are pure white, the latter with a segregation of dusky spots near the carpo-metacarpal joint." (*Ridgway.*)

Hab. Mazatlan, Mexico.

10. Anas luzonica.

Anas luzonica, *Fraser, P. Z. S.* 1839, p. 113 (Luzon); *G. R. Gr. List B. Brit. Mus.* iii. p. 136 (1844); *id. Gen. B.* iii. p. 616, n. 7 (1845); *Fraser, Zool. Typ.* pl. 67 (1849); *Rchnb. Syn. Av.*, Natatores, t. 94. f. 2346 (1850) (*ex Fraser*); *Bp. Compt. Rend.* xliii. p. 649, n. 70 (1856); *Mart. J. f. O.* 1866, p. 30; *Schleg. Mus. P.-B.*, Anseres, p. 42 (1866); *Eyt. Syn. Anat.* p. 96 (1869); *G. R. Gr. Hand-list*, iii. p. 82, n. 10626 (1871); *Hartl. & Finsch, P. Z. S.* 1872, p. 108; *Gieb. Thes. Orn.* i. p. 355 (1872); *Wald. Tr. Zool. Soc.* ix. p. 242 (1875); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* i. p. 354 (1876); *Tweedd. Orn. Works*, p. 404 (1881); *Wardl. Rams. op. cit.* p. 660 (1881); *Kütter, J. f. O.* 1882, p. 178; *Rchnw. Orn. Centralbl.* 1882, p. 19; *Steere, List B. & M. Philippines*, p. 27 (Guimaras, Marinduque, Siquijor) (1890); *Grant, Ibis*, 1895, p. 117.

Anas luconica, *Finsch, J. f. O.* 1870, p. 358.

Adult. General plumage brownish grey, almost uniform, without any dark markings in the centre of the feathers; upper part of the head and upper part of the nape blackish brown; superciliary stripe, sides of the head, throat, and sides of the upper part of the neck rufous; a blackish-brown band runs across the eyes from the lores to the occiput; back dark grey, changing into brown on the rump and upper tail-coverts; speculum glossy green, bounded anteriorly by a velvety-black band at the tip of the greater wing-coverts and by a narrower white one at the tip of the last row of the median upper wing-coverts; posteriorly the speculum is bounded by a velvety-black subapical band, and by a narrow apical white band; under wing-coverts and axillaries white; underparts brownish grey, deepening into brown on the under tail-coverts; tail brown: colours of the bill and feet not recorded, but apparently dark olive. Total length about 20 inches, wing 9·8, tail 4·5, culmen 2, tarsus 1·7.

Young. Similar to the adults, only much paler on the head and throat, which are scarcely tinged with rufous; the speculum less bright, and with some purple reflexions.

Hab. Philippines.

a. Ad. sk.	Manilla.	Eyton Coll. (Type of the species.)
b, c, d. Ad. et imm. st.	Manilla.	Cuming Coll.
e. Ad. sk.	Manilla (*Maitland Heriot*).	Tweeddale Coll.

11. Anas superciliosa.

Supercilious Duck, *Lath. Syn.* iii. 2, p. 497 (1785); *id. Gen. Hist.* x. p. 327 (1824).

Anas superciliosa, *Gm. S. N.* i. p. 537, n. 111 (1788) (Nova Seelandia); *Lath. Ind. Orn.* ii. p. 852, n. 51 (1790); *Bonn. Enc. Méth.* i. p. 145 (1790); *Bechst. Lath. Uebers.* iii. p. 430 (1796), iv. p. 512; *Vieill. N. Dict.* v. p. 120 (1816); *Dum. Dict. Sc. Nat.* vi. p. 389 (1817); *Steph. Gen. Zool.* xii. 2, p. 108 (1824); *Less. Tr. d'Orn.* p. 633 (1831); *Eyt. Mon. Anat.* p. 139 (1838); *Fraser, P. Z. S.* 1839, p. 114; *Müll. Verh. Land- en Volkenk.* pp. 159, 178 (1839–44) (Timor, Java); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 135 (1844); *id. Gen. B.* iii. p. 615, n. 4 (1845); *Gould, B. Austr.* vii. pl. 9 (pt. ix., 1845); *Peale, Un. St. Expl. Exp.* sp. 162 (1848); *Rchnb. Syn. Av.*, Natatores, t. 85. ff. 913–914 (1845), t. 94. f. 2347 (1850); *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1772 (1849); *Rchnb. Vög. Neuholl.* n. 311 (1851); *Hartl. Wiegm. Arch.* 1852, i. pp. 122, 136; *Macgill. Narr. Voy. Rattlesn.* p. 328 (1852); *id. J. f. O.* 1854, p. 169; *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 68 (excl. var. *a*) (1856); *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 339 (1858); *G. R. Gr. P. Z. S.* 1859, p. 166 (New Caledonia); *Pelz. Sitzb. Ak. Wien*, xli. p. 331 (Norfolk I.) (1860); *Ibis*, 1860, p. 422; *Verr. & Des Murs, Rev. et Mag. Zool.* 1860, p. 442 (New Caledonia); *Sclat. P. Z. S.* 1861, p. 371 (Zool. Gard.); *G. R. Gr. Ibis*, 1862, p. 241; *Newt. Ibis*, 1862, p. 285; *Wall. P. Z. S.* 1863, p. 487 (Timor); *Jouan, Mém. Soc. Cherb.* ix. p. 242 (1863); *Sclat. P. Z. S.* 1864, p. 9 (Huaheine); *Woodhouse, ibid.* p. 11; *Sclat. ibid.* p. 487; *Hartl. Ibis*, 1864, p. 232 (Fiji Isl.); *Buller, Ess. Orn. N. Zeal.* p. 18 (1865); *Finsch, Neu-Guin.* p. 183 (1865); *Gould, Handb. B. Austr.* ii. p. 363 (1865); *Rams. Ibis*, 1866, p. 335; *Sclat. P. Z. S.* 1866, p. 418 (Zool. Gard.); *Schleg. Mus. P.-B.*, Anseres, p. 42 (1866); *Hector, New Zeal. Exp.* p. 277 (1866); *Finsch, J. f. O.* 1867, pp. 336, 337; *Hutt. Ibis*, 1867, p. 379; *Hartl. P. Z. S.* 1867, p. 832; *F. & H. Orn. Centralpolyn.* p. 213 (1867); *id. P. Z. S.* 1868, pp. 4, 8, 118 (Pelew Isl.); *Müll. P. Z. S.* 1869, p. 280; *Sclat. ibid.* p. 659 (Pelew Isl.); *Eyt. Syn. Anat.* p. 96 (1869); *Hutt. Ibis*, 1870, p. 395; *F. & H. J. f. O.* 1870, p. 122; *Finsch, ibid.* pp. 357, 358; *Gräffe, ibid.* p. 403 (Samoa); *Marie, Act. Soc. Linn. Bord.* xxvii. p. 328 (1870); *G. R. Gr. Hand-list*, iii. p. 82, n. 10647 (1871); *Trav. Tr. & Pr. N. Z. Inst.* iv. p. 207 (1871), v. p. 218 (1872); ? *H. & F. P. Z. S.* 1872, pp. 90, 108 (Pelew); *Hutt. Ibis*, 1872, p. 247 (Chatham I.); *Gieb. Thes. Orn.* i. p. 363 (1872); *Finsch, J. f. O.* 1872, pp. 33, 56, 185; *Potts, Ibis*, 1873, p. 85; *Pelz. ibid.* p. 123; *Buller, B. New Zeal.* p. 245 (syn. emend.) (1873); *Finsch, J. f. O.* 1874, pp. 173, 202; *Layard, P. Z. S.* 1875, p. 440 (Fiji), 1876, p. 497 (Navigator Isl.), p. 503 (Friendly Isl.); *id. Ibis*, 1876, p. 393; *Cab. & Rchnw. J. f. O.* 1876, p. 329 (New Hanover); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 77, 195, 216, 219 (1876), ii. p. 200, n. 657 (1877); *Sharpe, Journ. Linn. Soc.* xiii. p. 505 (Port Moresby) (1877); *Rams. P. Z. S.* 1877, p. 346; *Finsch, ibid.* p. 737 (Kandavu), 776 (Euea), 785 (Ninafou); *Marie, Ibis*, 1877, p. 363; *Layard, Ibis*, 1878, p. 266 (New Caledonia), pp. 279, 280 (New Hebrides); *Tristr. ibid.* p. 279 (Aneiteum); *Sclat. P. Z. S.* 1878, p. 350; *Rams. Pr. Linn. Soc. N. S. W.* iii. p. 301 (1878), iv. p. 102,

n. 213 (1879); *Sclat. P. Z. S.* 1880, pp. 517, 535; *Legge, B. Ceyl.* p. 1074 (1880); *Finsch, Voy. Chall., Birds,* p 52 (1881); *Meyer, Verh. z.-b. Ges. Wien,* 1881, p. 767 (Sumba); *Reknw. Orn. Centralbl.* 1882, p. 18; *id. Vög. zool. Gärt.* p. 50 (1882); *Layard, Ibis,* 1882, pp. 537, 544; *Milne-Edwards, Ann. Sc. Nat., Zool.* (vi.) xiii., Art. 4, p. 41 (1882); *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 401, n. 5 (1882); *id. Orn. Pap. e Mol.* iii. p. 394 (1882); *Bull. Man. B. New Zeal.* p. 69 (1882); *Rams. Pr. Linn. Soc. N. S. W.* vii. p. 41 (Solomon Isl.) (1882); *Sclat. List Vert. An.* 8th ed. p. 431 (1883); *Meyer, Sitzb. u. Abh. Ges. Isis,* 1884, Abh. i. p. 57 (Celebes); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Rams. Pr. Linn. Soc. N. S. W.* (2) i. p. 1152 (1887); *Grant, P. Z. S.* 1888, p. 187 (Solomon Isl.); *Rams. Tab. List,* p. 22, n. 668, p. 38, n. 45 (Lord Howe and Norfolk Isl.) (1888); *Buller, B. New Zeal.* 2nd ed. ii. p 251 (1888); *Smith, Trans. N. Z. Inst.* xxi. 1888, p. 221 (Lake Brunner, N. Zealand) (1889); *North, Cat. Nests & Eggs,* p. 341 (1889); *Tristr. Cat. Coll. B.* p. 50 (Samoa and Huaehine Isl.) (1889); *Vorderm. N. T. N. I.* xlix. p. 419 (Sumatra, Java) (1889); *Salvad. Mem. R. Acc. Tor.* (ii.) xlii. p. 84 (*Agg. Orn. Pap. e Mol.* p. 210) (1891); ? *Cheeseman, Trans. N. Z. Inst.* xxiii. 1890, p. 221 (Kermadec Isl.) (1891); *Hartert, Kat. Vogelsamml.* p. 230 (Java) (1891); *Wiglesw. Aves Polyn.* p. 70 (1891); *Meyer, J.f. O.* 1892, p. 265; *Forbes, Ibis,* 1893, p. 543 (Chatham Isl.); *Tristr. Ibis,* 1894, p. 31 (Santa Cruz, Solomon Isl.).

Anas leucophrys, *Forst.* (*nec Vieill.*) *Descr. An.* (*ed. Licht.*) p. 93 (1844).

Anas sp., *G. R. Gr. Gen. B.* iii. p. 616, n. 11 (1845) (*ex S. Müll. Verh.* p. 178).

Anas mülleri, *Bp. Compt. Rend.* xliii. p. 649, n. 69 (1856) (Java, Timor).

Anas superciliosa, var., *G. R. Gr. Cat. B. Trop. Isl.* p. 54 (1859).

? Anas superciliosa, var. pelewensis, *Hartl. & Finsch, P. Z. S.* 1872, p. 108.

Anas pelewensis, *H. & F. MSS.*; *Finsch, Journ. Mus. Godeffr.* Heft viii. p. 40 (1875) *; *id. P. Z. S.* 1877, p. 738; *Schmeltz, Ethn. Abth. Mus. Godeffr.* 1881, p. 407 (note).

Anas superciliaris, "*Gm.*" (errore), *Layard, Ibis,* 1880, p. 233 (Loyalty Isl.).

Hybrid.

Anas superciliosa × Domestic Duck, *Kingsl. Trans. N. Z. Inst.* xxv. 1892, p. 107 (1893).

Adult male. General plumage above and below brown, the feathers narrowly edged with ochreous buff; upper part of the head and a band from the forehead through the eyes to the occiput brown-black; superciliary stripe and a band from the base of the upper

* I have examined a specimen from the Pelew Islands, in the Hamburg Museum, for the loan of which I have to thank the director Dr. Kraepelin; and I quite agree with Dr. Finsch, who has recognized that the Pelew Island bird, although smaller, like those from the Fiji, is not different from the true *A. superciliosa*.

mandible through the cheeks, chin, and throat pale buff immaculate; a dark band formed of small blackish streaks runs from the gape to the ear-coverts; upper part of the sides of the neck pale buff, minutely streaked with brown; a pale brown band along the nape; wings brown; speculum on the secondaries glossy green, bordered anteriorly by a black band at the tip of the greater wing-coverts, and posteriorly by another black band with a narrow white edge at the tip of the secondaries; outer web of the outer tertials black; under wing-coverts and axillaries white; rump and upper tail-coverts blackish brown; tail-feathers brown, with narrow pale edges: bill plumbeous, with the nail black; feet and toes yellowish brown, the membrane dusky brown. Total length about 24 inches, wing 10·75, tail 4·4, culmen 2·25, tarsus 1·65.

Female. Similar to the male.

Specimens from Timor, Pelew, Fiji, and Samoa Islands are decidedly smaller than those from Australia and New Zealand.

Hab. From Java and Timor to Southern New Guinea, Australia, New Zealand subregion and Polynesia, including the Pelew Islands.

a–f. Ad. sk.	Lake Wakolo, Bouru.	Dr. H. O. Forbes [P.].
g, *h*, *i.* Ad. sk. et st.	E. Timor.	A. R. Wallace, Esq. [C.].
k. Ad. st.	Australia.	Lady Carrington [P.].
l. Ad. sk.	Australia.	Sir G. Grey [P.].
m. ♂ ad. sk.	Australia.	H. J. Elwes, Esq. [P.].
n, *o.* Ad. sk.	Australia (*Cockerell & Thorpe*).	Salvin-Godman Coll.
p. Ad. sk.	W. Australia.	Governor of W. Australia [P.].
q. ♀ ad. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
r. Ad. sk.	Melbourne.	Tweeddale Coll.
s. ♂ ad. sk.	Tasmania.	Antarctic Exp. [C.].
t. Ad. st.	Tasmania.	R. Gunn, Esq. [P.].
u. Ad. sk.	New Zealand.	Sir G. Grey [P.].
v, *w*, *x.* Ad. sk.	New Zealand.	Antarctic Exp. [C.].
y. ♂ ad. sk.	Dusky Bay, Feb. (*Dr. Lyall*).	Capt. Stokes [P.].
z. ♂ ad. sk.	Otago, New Zealand, April.	Hume Coll.
a'. ♀ ad. sk.	Dusky Bay.	Dr. Lyell [P.].
b'. Ad. sk.	Chatham Is.	New Zealand Co. [P.].
c'. Ad. sk.	Campbell Is.	Antarctic Exp. [P.].
d', *e'.* ♂ ad. sk.	Kandavu, Fiji.	'Challenger' Exp. [P.].
f'. ♂ ad. sk.	Ovalau, Fiji, Nov. (*E. L. Layard*).	Tweeddale Coll.
g'. ♂ ad. sk.	Tongatabu, Friendly I., Nov.	Dr. Coppinger [P.].
h'. Ad. st.	Navigator Is.	Gould Coll.
i'. Ad. sk.	Navigator Is.	Rev. J. B. Stair [P.].
k'. Ad. sk.	Samoa.	Rev. J. Whitmee [P.].
l'. Ad. sk.	Huaheine, Society Is.	J. H. Gurney, Esq. [P.].
m'. Ad. sk	Huaheine, Society Is., July (*A. Garrett*).	Tweeddale Coll.
n'. Skeleton.	Tahiti.	'Challenger' Exp.

12. Anas pœcilorhyncha.

Anas pœcilorhyncha, *Forst. in Penn. Zool. Ind.* p. 23, t. xiii. f. 1 (Ceylon) (1781); *Lath. Ind. Orn.* ii. p. 850, n. 47 (1790); *Less. Tr. d'Orn.* p. 633, n. 54 (1831); *Gray & Hardw. Ill. Ind. Zool.* i. pl. 67 (1833–34); *G. R. Gr. Gen. B.* iii. p. 615, n. 2 (1845); *id. Cat. Hodgs. Coll. B. M.* p. 145 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1473 (1849); *Rchnb. Syn. Av.*, Natatores, t. 94. f. 2348 (1850) (*ex Gr. & Hardw.*); *Keluart, Prodr. Cat.* p. 136 (1852); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (1854); ? *Licht. Nomencl. Av.* p. 101 (Kafferland !) (1854); *Adams, P. Z. S.* 1858, p. 510 (Indus); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Jerd. B. of Ind.* iii. p. 799 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 43 (part.) (1866); *Eyt. Syn. Anat.* p. 94 (1869); *Sclat. P. Z. S.* 1872, p. 729 (Zool. Gard.); *Gieb. Thes. Orn.* i. p. 360 (1872) (syn. emend.); *Holdsw. P. Z. S.* 1872, p. 479; *Hume, Str. Feath.* i. p. 261 (1873); *Adam, ibid.* p. 492; *Legge, Ibis*, 1875, p. 407 (Ceylon); *Blyth, B. Burma*, p. 165 (Arakan, Bhamo, Tenasserim) (1875); *Hume & Davis. Str. Feath.* iv. p. 489 (1878); *Anders. Yunn. Exped.* p. 699 (1879); *Hume, Str. Feath.* vii. p. 507 (1879), viii. p. 115, n. 959 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 168, pl. 22 (1880); *Sclat. P. Z. S.* 1880, p. 518; *Legge, B. of Ceyl.* p. 1073 (1880); *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 51 (1882); *Salv. Cat. B. Strickl. Coll.* p. 534 (1882); *Oates, B. Brit. Burm.* ii. p. 283 (1883); *Sclat. List Vert. An.* 8th ed. p. 431 (1883); *Salvad. Ann. Mus. Civ. Gen.* (2) iv. p. 516 (Bhamo) (1887); *Tristr. Cat. Coll. B.* p. 49 (1889); *Hume, Nests & Eggs* (*Oates' ed.*), p. 289 (1890); *Hartert, Kat. Vogelsamml.* p. 230 (1891).

Spotted-billed Duck, *Lath. Syn.* iii. 2, p. 487, n. 40 (1785).

Anas pœkilorhyncha, *Gm. S. N.* i. 2, p. 535, n. 105 (1788); *Bonn. Enc. Méth.* i. p. 144, pl. 34. f. 2 (1790); *Dum. Dict. Sc. Nat.* vi. p. 379 (1817); *G. R. Gr. Hand-list*, iii. p. 82, n. 10643 (1871); *Hume, Nests & Eggs Ind. B.* p. 643 (1873); *Butl. Str. Feath.* iv. p. 29 (1874); *Hume, ibid.*

Anas erythrorhyncha, *Vieill.* (*nec Gm.*) *N. D.* v. p. 108 (part.) (1816).

Marecca pœcilorhyncha, *Steph. Gen. Zool.* xii. 2, p. 134 (1824); *Sykes, P. Z. S.* 1832, p. 166, n. 218.

Anas pæcilorhyncha, *Eyt. Mon. Anat.* p. 138 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 136 (1844); *Bp. Compt. Rend.* xliii. p. 694, n. 67 (1856).

Tadorna ? pœcilorhyncha, *Jerd. Madr. Journ.* xii. p. 221, n. 387 (1840).

? Chaulelasmus streperus, *Stoliczka* (*nec auct.*), *J. A. S. B.* xli. 1, p. 255 (1872) (*cf. Hume, Str. Feath.* iv. p. 29).

Adult male. Upper part of the head and a broad band from the lores through the eyes to some distance behind them dark brown; superciliary stripe, sides of the head, and upper part of the neck dull whitish, minutely streaked with dark brown; throat immaculate; back and scapulars greyish brown, each feather edged with pale brown; lower back, rump, upper and under tail-coverts brown-black; breast and abdomen fulvous white, spotted throughout with round brown marks well defined; lower abdomen changing into dark brown; upper wing-coverts dark grey, with lighter edges; the last row, or greater ones, with a subterminal white band and

a terminal one velvety black, bordering the glossy green speculum, which is bordered posteriorly by a subterminal velvety black band and an apical one at the tip of the secondaries; tertiaries brown, but the outer ones mostly white on the outer web; primaries brown; under wing-coverts and axillaries white; tail brown, the central feathers velvety black with a green lustre, each feather with the edge of the outer web pale: "iris reddish brown; bill black, tip chrome-yellow, the nail black; base of the culmen yellow" (*Legge*): "mandible at the forehead red" (*Oates*): "tip of the lower mandible yellow; legs and feet orange-yellow; claws black" (*Legge*). Total length about 24 inches, wing 11, tail 5, culmen 2·25, tarsus 1·75.

Female. Similar to the male, but somewhat smaller; wing about 10 inches.

Young. Wants the red at the base of the upple mandible (*Oates*), and besides it is much less spotted on the underparts, where the breast is unspotted white; the dark spots on the lower neck and on the abdomen are much smaller.

Hab. India and Ceylon; it extends to Independent Burmah; rarely, if ever, in Pegu and Tenasserim.

a. Juv. sk.	India.	Tweeddale Coll.
b–e. ♂ ♀ ad. sk.	R. Jhelum, above Jung, April, Nov. (*A. O. H.*).	Hume Coll.
f. ♀ ad. sk.	Chenab R., Dec. (*A. O. H.*).	Hume Coll.
g. ♂ ad. sk.	Ranepoor, Sindh, Feb.	India Museum [P.].
h. Ad. sk.	Sirdhar, Kattiawar, Dec.	Gould Coll.
i. Ad. sk.	Punjaub, Feb.	Hume Coll.
k–o. ♂ ♀ ad. et imm. sk.	Sambhur, July, Aug., Dec. (*R. M. Adam*).	Hume Coll.
p. ♀ ad. sk.	Sambhur, Jan. (*R. M. Adam*).	Tweeddale Coll.
q. r. s. Ad. sk.	Etawah.	Hume Coll.
t. Ad. sk.	Roy Bareilly, Dec.	Hume Coll.
u. ♂ ad. sk.	Phoolpore, Allahabad, Feb. (*A. O. H.*).	Hume Coll.
v, w, x. Ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
y. Ad. sk.	Oudh.	Hume Coll.
z, a'. ♂ ♀ ad. sk.	Lucknow District, Dec., Jan. (*G. Reid*).	Hume Coll.
b', c'. Ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
d'. Ad. sk.	Assam (*A. W. Chennell*).	Tweeddale Coll.
e'. Ad. sk.	Assam (*McClelland*).	India Museum [P.].
f', g'. ♂ ♀ ad. sk.	Dibrughur, Jan., Feb. (*J. R. Cripps*).	Hume Coll.
h', i'. Ad. sk.	Manipur (*A. O. H.*).	Hume Coll.
k', l'. Ad. st.	Gwalior.	C. Maries, Esq. [P.].
m', n', o'. Ad. sk.	Deccan (*Sykes*).	India Museum [P.].
p'. Juv. sk.	Shan States.	E. W. Oates, Esq. [P.].
q'. Ad. st.	[Himalayas.]	Gould Coll.
r'. Juv. st.	[China.]	J. R. Reeves, Esq. [P.].
s', t'. Skeletons.		
u'. Skeleton.		Zool. Soc.

HYBRID.

Anas pœcilorhyncha × *A. boscas.*

♂. Ad. st. [In confinement.] T. H. Powell, Esq. [P.].

13. Anas zonorhyncha.

Anas pœcilorhyncha, *Rchnb.* (*nec Forst.*) *Syn. Av.*, Natatores, t. 111. f. 1081 (1845); *Temm. & Schleg. Faun. Jap., Aves*, p. 126, pl. 82 (1850); *Rchnb. Syn. Av.*, Natatores, t. 100. f. 2763 (1850) (*ex Temm. & Schleg.*); *Radde, Reis. S. O.-Sibir.* ii. p. 364 (1863); *Swinh. P. Z. S.* 1863, p. 324 (China); *id. Ibis*, 1863, p. 434 (Formosa); *Schleg. Mus. P.-B.*, Anseres, p. 66, p. 42 (part., specim. 3, 4, 5, Japan) (1866); ? *Tacz. J. f. O.* 1870, p. 312 (Dauria); *Homey. ibid.* p. 431 (E. Sibir. & Amurl.); *A. David, N. Arch. Mus., Bull.* vii. *Cat.* n. 446 (1871); *Dyb. J. f. O.* 1873, p. 109 (E. Siberia), 1874, p. 336.

Anas zonorhyncha, *Swinh. Ibis*, 1866, p. 394 (Ningpo); *id. P. Z. S.* 1870, p. 427 (Canton), 1871, p. 417 (China); *G. R. Gr. Handlist*, iii. p. 82, n. 10644 (1871); *Gieb. Thes. Orn.* i. p. 365 (1872); *Swinh. Ibis*, 1873, p. 367, 1874, p. 164 (Hakodadi); *Tacz. Bull. Soc. Zool. Fr.* 1877, p. 45; *David & Oust. Ois. Chine*, p. 496 (1877); *Blak. & Pryer, Ibis*, 1878, p. 213 (Japan); *Prjev. Rowley's Orn. Misc.* iii. p. 103 (S.E. Mongolia) (1878); *Sclat. P. Z. S.* 1880, p. 518; *Rchnw. Orn. Centralbl.* 1882, p. 19; *Blak. & Pryer, Tr. As. Soc. Jap.* x. p. 96 (Kuriles) (1882); *Jouy, Pr. U.S. Nat. Mus.* vi. p. 318 (1883); *Styan, P. Z. S.* 1887, p. 2 (egg); *Tacz. P. Z. S.* 1888, p. 458 (Corea); *Seebh. Birds Japan. Emp.* p. 243 (1890); *Styan, Ibis*, 1891, pp. 328, 496; *Seebh. Ibis*, 1892, p. 96 (Tsu-sima); *De la Touche, ibid.* p. 491 (China).

Adult male. Resembles the male of *A. pœcilorhyncha*. Upper part of the head and a broad stripe from the lores through the eyes to some distance behind them dark brown; superciliary stripe, sides of the head, and throat whitish: from the gape towards the eyes a slightly indicated dusky band, formed by dusky streaks; upper parts brown, the back and scapulars paler, with the edges of the feathers pale greyish; rump and upper tail-feathers uniform dark brown; lower part of the fore neck and upper breast dull whitish buff, with the centres of the feathers dusky; lower breast and abdomen almost uniform brown, deepening into black-brown on the under tail-coverts; wings brown; speculum glossy blue, more or less with a green lustre, bordered anteriorly and posteriorly by two velvety black bands; the tip of the secondaries narrowly edged with white; tertials brown, with only the apical part of the outer web white; tail brown, the edges of the feathers whitish: bill black, with the apical portion, except the tip of the nail, yellow, no red spots at the base; feet light bright red, the web slightly dusky; irides yellowish brown (*Holst*). Total length about 23 inches, wing 11·6, tail 4·8, culmen 2·2, tarsus 1·75.

Female. Smaller and paler, the feathers of the breast for a greater extension than in the male having broader whitish edges.

Young. Paler even than the female, with smaller dusky spots on the underparts; the edges of the upper wing-coverts pale; a broad

subapical white band across the greater wing-coverts, and the outer web of the tertials for the greater part white.

Hab. China, Mongolia, and Eastern Siberia; Japan and Kuriles.

a. Ad. sk.	No locality.	Tweeddale Coll.
b, c, d. Ad. sk.	China (*Tuckett*).	Tweeddale Coll.
e, f, g. ♂ ♀ ad. sk.	Shanghai, China, March, Nov. (*R. Swinhoe*).	Seebohm Coll. (Types of the species.)
h. ♂ ad. sk.	Shanghai, China, Nov.	R. Swinhoe, Esq. [C.].
i. Ad. sk.	Kiukiang, China, Feb.	F. W. Styan, Esq. [P.].
k. Ad. sk.	Canton, China.	Tweeddale Coll.
l. ♀ ad. sk.	Nagasaki, Japan, Dec.	F. Ringer, Esq. [P.].
m. Ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
n. ♂ ad. sk.	Kechi village, Tsu-shima, Feb. (*P. A. Holst*).	Seebohm Coll.
o. Ad. st.	Hakodadi, Japan.	H. Whitely, Esq. [C.].
p. Sternum.	Hakodadi, Japan.	H. Whitely, Esq. [C.].

14. Anas undulata.

Anas flavirostris, *Smith* (*nec Vieill.*), *Cat. S. Afr. Mus.* p. 36, n. 323 (1837) (descr. nulla); *Eyt. Mon. Anat.* p. 141 (Cape of Good Hope) (1838); *Smith, Ill. Zool. S. Afr., Birds*, pl. 96 (1844); *Des Murs in Lefebvre, Voy. Abyss.* p. 171 (1845–50); *Bp. Compt. Rend.* xliii. p. 649, n. 65 (1856); *Heugl. Syst. Uebers.* n. 697 (1856); *id. J. f. O.* 1862, pp. 293, 306, 1863, p. 4; *Pelz. Reise Novara, Vögel*, p. 138 (Cape) (1866); *Layard, B. S. Afr.* p. 352 (1867); *Gurn. Ibis*, 1868, p. 49 (Natal); *Heugl. Reise nach Abess.* 1861–62, pp. 286, 317 (1868); *Chapm. Trav. S. Afr.*, App. p. 422 (1868); *Bocage, Jorn. Ac. Sc. Lisb.* 1868, p. 50; *Heugl. Peterm. Geogr. Mitth.* 1869, p. 417; *Eyt. Syn. Anat.* p. 98 (1869); *Blanf. Geol. & Zool. Abyss.* p. 437 (1870); *Finsch, Tr. Zool. Soc.* vii. p. 329 (1870); *Bocage, Jorn. Ac. Sc. Lisb.* 1870, p. 351; *Buckl. Ibis*, 1874, p. 390 (Natal); *Fischer, Zeitschr. ges. Orn.* 1884, p. 394 (Masailand).

Anas undulata, *Dubois, Orn. Gall.* p. 119, pl. 77 (Cape) (1839).

Anas xanthorhyncha, *Forst. Icon. ined.* t. 72 (*nec* t. 71); *id. Descr. Anim.* (*ed. Licht.*) p. 45 (*nec* p. 342) (Cape of Good Hope) (1844); *G. R. Gr. Gen. B.* iii. p. 616, n. 12 (1845); *Rchnb. Syn. Av.*, Natatores, t. 85. f. 917 (*ex Smith*) (1845); *Bolle, J. f. O.* 1856, p. 164 (Zool. Gard.); *Roch & E. Newt. Ibis*, 1863, p. 174 (Madagascar); *Schleg. Mus. P.-B.*, Anseres, p. 43 (1866); *Sclat. P. Z. S.* 1869, p. 629 (Zool. Gard.); *G. R. Gr. Hand-list*, iii. p. 82, n. 10639 (1871); *Gieb. Thes. Orn.* i. p. 365 (1872); *Gurn. in Anderss. B. Dam. Land*, p. 342 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1346 (1873); *Ayres, Ibis*, 1874, p. 105 (Transvaal), 1880, p. 273; *Sclat. P. Z. S.* 1880, p. 518; *Bocage, Orn. Angola*, p. 500 (1881); *Sharpe in Oates' Matab. Land*, p. 327 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 18; *id. Vög. zool. Gärt.* p. 51 (1882); *Shell. Ibis*, 1882, p. 368; *Holub, Beitr. Orn. Südafr.* p. 329 (1882); *Butl., Feild., & Reid, Zoolog.* 1882, p. 437 (Natal); *Sclat. List Vert. An.* 8th ed. p. 431 (1883); *Sharpe, Layard's B. S. Afr.* p. 755 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 243 (1884); *Fischer, J. f. O.* 1885, p. 115 (Lake Naiwascha); *Rchnw. J. f. O.* 1887, p. 46; *Clifton, Ornis*, 1888, p. 154 (Cape Colony); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 320 (Shoa) (1888); *Tristr. Cat. Coll. B.* p. 50 (1889); *Hartert, Kat. Vogelsamml.* p. 230 (1891);

Shell. Ibis, 1894, p. 478 (Palombi River); *Reichenw. Vög. Deutsch-Ost-Afr.* p. 26 (1894).

Anas capensis, *Licht.* (*nec Gm.*) *Verz. Säugeth. u. Vög.* p. 20, n. 251, 252 (Kafferl.) (1842); *id. in Forst. Descr. An.* p. 45 (note) (1844); ? *id. Nomencl. Av.* p. 101 (1854).

Anas rueppelli, *Blyth, J. A. S. B.* xiv. p. 265 (1856); *id. Ibis*, 1867, p. 176 (= flavirostris, *Smith*); *Jerd. B. of Ind.* iii. p. 800 (1864); *Gieb. Thes. Orn.* i. p. 361 (1872).

Querquedula xanthorhyncha, *Sharpe, Ibis*, 1892, p. 541 (Machako).

Adult male. Dark brown above with narrow pale edges, below the edges of the feathers are broader and whiter; head rather dark, the light edges being very narrow; also the upper wing-coverts with narrow light edges; wing-speculum very broad, of a metallic green with a bluish gloss, bounded anteriorly and posteriorly by two bands, one velvety black and the other white; outer tertials velvety black on the outer web; under wing-coverts whitish; axillaries white; tail-feathers dark brown, with narrow pale edges: "irides chestnut; bill yellow, with a long longitudinal patch on the culmen, and the nail black; feet black" (*Antinori*), "tinged with yellow" (*Ayres*). Total length about 20 inches, wing 10·75, tail 4·5, culmen 2, tarsus 1·55.

Female. Similar to the male.

Hab. South Africa, Eastern Africa as far north as Abyssinia, and Western Africa as far north as Angola.

a. Ad. st.	Cape of Good Hope.	Sir A. Smith. (Type of *Anas flavirostris*, Smith.)
b, c. Ad. sk.	Port Natal (*T. Ayres*).	Shelley Coll.
d. Ad. sk.	Movi R., Natal, May (*Buckley*).	Shelley Coll.
e. Ad. sk.	Transvaal.	H. J. Elwes, Esq. [P.].
f. Ad. st.	Transvaal Republic.	A. Foresman, Esq. [P.].
g, h. ♂ ♀ ad. sk.	Potchefstroom, Aug. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
i, k. Ad. sk.	Potchefstroom.	F. A. Barratt, Esq. [P.].
l. ♀ ad. sk.	Near Pretoria, June (*F. Oates*).	W. E. & C. G. Oates, Esqrs. [P.].
m, n. ♂ ♀ ad. sk.	Palombi R., Nyassa-land, Aug. (*A. Whyte*).	H. H. Johnston, Esq., C.B. [P.].
o. Ad. st.	Shoa (*Harris*).	India Museum [P.].
p, q. ♂ ad. sk.	Angollalah, May (*Harris*).	India Museum [P.].
r. ♂ ad. sk.	Agula, Abyssinia, May.	W. T. Blanford, Esq. [C.].
s. Pull. st.		Zool. Soc.

HYBRID.

Anas undulata × *A. obscura*.

t. Ad. st.	Zool. Soc.

15. Anas sparsa.

Anas sparsa, *Smith, Cat. S. Afr. Mus.* p. 36, n. 324 (1837) (descr. nulla); *Eyt. Mon. Anat.* p. 142 (S. Afr.) (1838); *Smith, Ill. Zool. S. Afr., Birds*, pl. 97 (pt. 21, 1844); *G. R. Gr. Gen. B.* iii. p. 616, n. 9 (1845); *Reichenb. Syn. Av.* t. 110. ff. 911 (*ex Smith*),

979 (1845); *Gurn. Ibis*, 1859, p. 251 (Natal); *Heugl. J. f. O.* 1862, p. 306; *Kirk, Ibis*, 1864, p. 336 (Zambesi); *Layard, B. S. Afr.* p. 352 (1867); *Chapm. Trav. in S. Afr.* ii. App. p. 422 (1868); *Heugl. Reise nach Abess.* 1861–62, pp. 296, 308 (1868); *id. Peterm. Geogr. Mitth.* 1869, p. 417; *Eyt. Syn. Anat.* p. 99 (1869); *Finsch & Hartl. Vög. Ost-Afr.* p. 809 (1870); *G. R. Gr. Hand-list*, iii. p. 82, n. 10642 (1871); *Anderss. B. Damara Land*, p. 341 (1872); *Heugl. Orn. N.O.-Afr.* ii, 2, p. 1317 (1873); *Ayres, Ibis*, 1874, p. 105 (Transvaal), 1876, p. 433, 1880, p. 273 (Transvaal); *Sclat. P. Z. S.* 1880, p. 518; *Rchnw. Orn. Centralbl.* 1882, p. 19; *Butl., Feild., & Reid, Zoolog.* 1882, p. 427 (Natal) (1882); *Holub, Beitr. Orn. Südafr.* p. 330 (1882); *Sharpe, Layard's B. S. Afr.* p. 756 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 244 (Shoa) (1884), vi. p. 321 (Shoa) (1888); *Tristr. Cat. Coll. B.* p. 49 (1889); *Hartert, Kat. Vogelsamml.* p. 230 (1891); *Shell. Ibis*, 1894, p. 28 (Zomba); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 26 (1894).

Anas flavirostris, *G. R. Gr.* (*nec Smith*), *List B. Brit. Mus.* iii. p. 137, spec. *a* (1844).

Anas leucostigma, *Rüpp. Syst. Uebers.* pp. 130, 138, Taf. 48 (S. Abyssinia) (1845); *Des Murs in Lefebvre, Voy. Abyss., Ois.* p. 171 (1845); *Blyth, J. A. S. B.* xxiv. p. 265 (1855); *Heugl. Syst. Uebers.* n. 695 (1856); *Blyth, Ibis*, 1867, p. 176; *Cab. in v. d. Decken, Reisen*, iii. p. 51 (1869).

Anas guttata, *Licht. Nomencl. Av. Mus. Berol.* p. 101 (Caffraria) (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 66 (1856); *Jerd. B. of Ind.* iii. p. 800 (1864); *Schleg. Mus. P.-B.*, Anseres, p. 49 (1866); *Gieb. Thes. Orn.* i. p. 353 (1872).

Adult male. General plumage dark sepia-brown, the head and upper neck lighter, having the feathers edged with whitish; the feathers of the underparts with narrow pale edges; scapulars and tertials with one, two, or three whitish-buff bars, interrupted by the shaft; wing-speculum metallic green with a blue gloss, bounded anteriorly by two bands on the last row of the wing-coverts, one white subterminal, and the other on the tip velvety black; posteriorly the speculum is bounded by a black subterminal band and a terminal one white; under wing-coverts white, mixed with black; axillaries white; tail-feathers, upper and under tail-coverts almost black, with whitish bars, oblique on the tail-feathers: "irides dark chestnut; bill yellow on the edges and at the base, broadly black on the culmen and on the nail; feet orange, webs black" (*Antinori, Ragazzi*). Total length about 21 inches, wing 10·5, tail 5·5, culmen 1·85, tarsus 1·55.

Female. Similar to the male, but somewhat smaller.

Hab. Southern and Eastern Africa, as far north as S. Abyssinia.

a. Ad. st.	S. Africa.	Sir A. Smith [P.]. (Type of the species.)
b. Ad. st.	Cape of Good Hope.	Purchased.
c. ♂ juv. sk.	Grahamstown, Jan. (*Atmore*).	Shelley Coll.
d, *e*. Ad. sk.	Natal (*Ayres*).	Tweeddale Coll.
f. Ad. sk.	Port Natal (*Ayres*).	Shelley Coll.
g. ♀ juv. sk.	Pietermaritzberg, May (*T. E. Buckley*).	Shelley Coll.

h, *i*. ♂ ad. et ad. sk.	Potchefstroom, March, April (*Ayres*).	J. H. Gurney, Esq. [P.].
k, *l*. Ad. et juv. sk.	Zomba, Nyassa-land, Oct. (*A. Whyte*).	Sir H. H. Johnston, C.B. [P.].

16. Anas specularis.

Anas specularis, *King, Zool. Journ.* iv. p. 98 (Straits of Magellan) (1828); *Eyt. Mon. Anat.* p. 138 (1838); *Jard. & Selb. Ill. Orn.* iv. pl. 40 (1840); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 136 (1844); *id. Gen. B.* iii. p. 615, n. 3 (1845); *Des Murs, in Gay's Hist. de Chile*, i. p. 450 (1848); *Rchnb. Syn. Av.*, Natatores, t. 94. f. 2349 (*ex J. & S.*) (1850); *Hartl. Naumannia*, 1853, pp. 217, 222 (Chili); *Cass. U.S. Astron. Exped., Zool.* p. 202 (1856); *Pelz. Reise Novara, Vög.* p. 138 (Chili) (1865); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Phil. & Landb. Cat. Av. Chil.* p. 42 (1868); *Eyt. Syn. Anat.* p. 95 (syn. emend.) (1869); *Sclat. & Salv. P. Z. S.* 1876, p. 380; *Sclat. P. Z. S.* 1880, p. 519, 1881, p. 734 (Zool. Gard.); *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 51; *Sclat. List Vert. An.* 8th ed. p. 432 (1883); *Burm. An. Mus. Nac. Buen. Air.* iii. p. 248 (1888); *Tristr. Cat. Coll. B.* p. 49 (1889); *Hartert, Kat. Vogelsamml.* p. 230 (1891); *Berkeley James, New List Chil. B.* p. 9, n. 150 (1892).

Anas chalcoptera, *Küttl. Mém. prés. Acad. St. Pétersb.* ii. p. 471, pl. 5 (1835); *Fraser, P. Z. S.* 1843, p. 119 (Colchagua); *Rchnb. Syn. Av.*, Natatores, t. 100. ff. 2766–67 (1850); *Licht. Nomencl. Av.* p. 101 (1854); *Bp. Compt. Rend.* xliii. p. 649, n. 74 (1856); *Schleg. Mus. P.-B.*, Anseres, p. 46 (Bolivia) (1866); *G. R. Gr. Hand-list*, iii. p. 82, n. 10650 (1871); *Gieb. Thes. Orn.* i. p. 347 (1872); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873).

Adult male. Head and neck brown, but a large spot on the sides of the face, chin, and middle of the throat white, spreading on the sides of the neck; back glossy brown-black, with the edges of the feathers pale brown; lower back uniform glossy brown-black, changing into olive-brown on the upper tail-coverts; underparts pale rufescent, more or less with obsolete brown bars or transverse spots; sides and flanks with brown-black spots; wings black with a green lustre; speculum on the secondaries coppery red, bounded posteriorly by a subterminal velvety black band and by a white apical band; under wing-coverts glossy black, the greater ones dark grey; axillaries white; tail above brown-black, with a green lustre, below greyish brown: "bill black; legs red" (*King*); "legs yellow" (*Sclater & Salvin*). Total length about 21 inches, wing 10·5, tail 4·8, culmen 1·9, tarsus 1·65.

Female. Similar to the male, but duller.

Young in down. Upper parts brown; underparts, sides of the head, a band on the posterior edge of the wing, joining another on the sides of the back, and a spot on each side of the rump whitish; a brown band from the eye to the occiput, and a second one across the cheeks (*Mus. Turin*).

Hab. Central and Southern Chili, (Bolivia?), and Magellan Straits.

a. ♀ ad. sk.	Chili (*E. C. Reed*).	Salvin-Godman Coll.
b, c, d. Ad. sk.	C. Chili.	H. Berkeley James, Esq. [P.].
e, f. ♂ ad. sk.	Rio Pilmacquen, Feb.	H. Berkeley James, Esq. [P.].
g, h. Ad. st.	Straits of Magellan.	The Admiralty [P.].
i. Juv. st.	Straits of Magellan.	Sir W. Burnett & Capt. Fitzroy [P.].
k. Ad. sk.	Straits of Magellan (*Weishaupt*).	Salvin-Godman Coll.

17. Anas cristata.

Crested Duck, *Lath. Syn.* iii. 2, p. 543, n. 81 (Staaten Land) (1785).

Anas cristata, *Gm. S. N.* i. 2, p. 540, n. 114 (1758) (*ex Latham*); *Lath. Ind. Orn.* ii. p. 870, n. 93 (1790); *Bonn. Enc. Méth.* i. p. 143 (1790); *Vieill. N. D.* v. p. 120 (1816); *Dum. Dict. Sc. Nat.* vi. p. 383 (1817); *G. R. Gr. List B. Brit. Mus.* iii. p. 136 (1844); *id. Gen. B.* iii. p. 616, n. 6 (1845); *Des Murs in Gay Hist. de Chile*, i. p. 449 (1848); *Gould, P. Z. S.* 1859, p. 96 (egg, Falklands); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 160 (Falklands); *Pelz. Reise Novara, Vög.* p. 138 (Chili) (1865); *Schleg. Mus. P.-B.*, Anseres, p. 39 (Bolivia, *D'Orbigny*) (1866); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Sclat. & Salv. l. c.* p. 990 (Salinas, Peru), 1868, p. 570; *Phil. & Landb. Cat. Av. Chil.* p. 41 (1868); *Sclat. & Salv. Ibis*, 1870, p. 499 (Tuesday Bay); *G. R. Gr. Hand-list*, iii. p. 82, n. 10651 (1871); *Gieb. Thes. Orn.* i. p. 349 (1872); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Pelz. Ibis*, 1873, p. 46; *Tacz. P. Z. S.* 1874, p. 554 (Junin, Centr. Peru); *Sclat. & Salv. P. Z. S.* 1876, p. 381; *Sclat. P. Z. S.* 1880, p. 519; *Sharpe, P. Z. S.* 1881, p. 13; *Rchnw. Orn. Centralbl.* 1882, p. 19; *Tacz. Orn. Pér.* iii. p. 473 (1886); *Sclat. P. Z. S.* 1886, p. 401 (Tarapacá), 1887, p. 396 (Zool. Gard.); *Philippi, Ornis*, 1888, p. 160 (Pastos largos); *Burm. An. Mus. Nac. Buen. Air.* iii. p. 248 (1888); *Tristr. Cat. Coll. B.* p. 49 (Tilly Bay, Magellan) (1889); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 199 (1891); *Berkeley James, New List Chil. B.* p. 9, n. 151 (1892).

Tadorna cristata, *Steph. Gen. Zool.* xii. 2, p. 77 (1824).

Anas specularioides, *King, Zool. Journ.* iv. p. 98 (Straits of Magellan) (1828); *Gibson, Pr. Phys. Soc. Edinb.* iv. p. 186 (1878) (= A. cristata).

Milouin des Malouines, *Less. Tr. d'Orn.* p. 632, n. 42 (1831); *Pucher. Rev. et Mag. Zool.* 1850, p. 636 (= A. specularioides).

Anas pyrrhogastra, *Meyen, Nov. Act.* xvi. *Suppl.* p. 119 (Maipú, Chili) (1833); *Hartl. Naumannia*, 1853, p. 222.

Anas pyrrhogaster, *Meyen, l. c.* tab. xxv. (1833).

Dafila pyrogaster, *Eyt. Mon. Anat.* p. 113 (1838); *Fraser, P. Z. S.* 1844, p. 157 (Chili); *Eyt. Syn. Anat.* p. 65 (1869).

Anas lophyra, *Forst. Icon. ined.* t. 78; *id. Descr. An.* (*ed. Licht.*) p. 340 (Magellan Straits) (1844).

Dafila pyrrhogastra, *Rchnb. Syn. Av.*, Natatores, t. 88. f. 923 (1845).

Dafila cristata, *Bp. Compt. Rend.* xliii. p. 650, n. 114 (1856).

Daphila cristata, *Gieb. Thes. Orn.* ii. p. 14 (1875).

Adult male. Head and upper part of the neck dull greyish, minutely spotted with brown; a large brown patch covers the occiput

and extends to the eyes; nape with a long pendent crest; chin and throat whitish immaculate; back and scapulars brown, the feathers of the back with pale edges, the scapulars darker towards the tip; lower back, rump, and upper tail-coverts uniform olive-brown; breast and abdomen pale rufescent, the feathers of the breast with a brown spot in the centre; the abdomen with obsolete darker bars; longer under tail-coverts black; wings olive brown-grey, speculum on the secondaries coppery red with a green gloss, and bounded posteriorly by a velvety black band, broader on the inner feathers, and by a second white band at the tip of the secondaries; primaries olive-brown; under wing-coverts olive brown-grey, the greater ones grey; axillaries white; tail brown-black, with a purple gloss: "iris blood-red" or orange (*Berkeley James*); "legs dark grey, upper mandible horn colour, lower one flesh-colour" (*Coppinger*). Total length about 24 inches, wing 11·5, tail 6, culmen 1·85, tarsus 1·75.

Female. Similar to the male, but somewhat smaller, and the crest shorter.

This species is not a very typical member of the genus *Anas*.

Hab. Southern America, from S. Peru (and Bolivia ?) to Magellan Straits, and also the Falklands.

a. Ad. sk.	S. America.	Eyton Coll.
b. ♂ ad. st.	Salinas, Peru, 14,000 ft., July.	H. Whitely, Esq. [C.].
c. ♀ ad. sk.	Salinas, Peru, 14,000 ft., July (*H. Whitely*).	Tweeddale Coll.
d. Ad. sk.	Tinta, Peru, June (*H. W.*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Prov. Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
f. Ad. sk.	Prov. of Tarapacá.	H. Berkeley James, Esq. [P.].
g, *h*. ♂ ♀ ad. sk.	Lake Huasco, Tarapacá, Jan.	H. Berkeley James, Esq. [P.].
i–*o*. ♂ ♀ ad. sk.	Sacaya, Jan., Feb.	H. Berkeley James, Esq. [P.].
p–*s*. ♂ ♀ ad. sk.	Sitana, Jan.	H. Berkeley James, Esq. [P.].
t. Ad. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
u. ♂ ad. sk.	Straits of Magellan.	H. J. Elwes, Esq. [P.].
v. Ad. st.	Straits of Magellan.	The Admiralty [P.].
w. ♀ ad. sk.	Cockle Cove, Straits of Magellan, Feb.	Dr. Coppinger [P.].
x. ♀ ad. sk.	Port Rosario, March.	Dr. Coppinger [P.].
y. ♂ ad. sk.	North Bay, Hermit Is., Sept. (*R. McC.*).	McCormick Bequest.
z. ♀ ad. sk.	North Harbour, Hermit Is.	Antarctic Exp. [C.].
a'. Ad. st.	Falkland Is.	The Admiralty [P.].
b'. Ad. sk.	Falkland Is.	Eyton Coll.
c'. ♀ ad. sk.	Falkland Is.	Antarctic Exp. [C.].
d'. Ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.
e', *f'*. Ad. sk.	Falkland Is.	Tweeddale Coll.
g'. ♂ ad. sk.	Berkeley Sound, E. Falklands, May.	Antarctic Exp. [C.].

28. EUNETTA.

Type.

Eunetta, *Bp. Compt. Rend.* xliii. p. 650, gen. 35 (1856) . . E. falcata.

Range. Eastern Palæarctic Region.

1. Eunetta falcata.

Anas falcata, *Georgi, Reise Russ. Reichs,* i. p. 167 (1775); *Pall. Zoogr. Rosso-As.* ii. p. 259, tab. lxx. (1811); *Brandt, Descr. et Icon. An. Ross.* fasc. i. p. 21, t. 3 (1836); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Midd. Sibir. Reis.* ii. p. 231, Taf. xxi. f. 2 (young ♂) (1853); *Bp. Compt. Rend.* xliii. p. 1025 (1856); *Kittl. Denkw.* ii. p. 307 (1858); *Blas. u. Bald. Naumann's Vög. Deutschl.* xiii. 2, p. 300, Taf. 389. f. 1 (♂) (1860); *Schleg. Mus. P.-B.*, Anseres, p. 72 (1866); *Dyb. u. Parr. J. f. O.* 1868, p. 338 (Dauria); *Przew. Voy.* n. 201 (1867-69); *id. Putesch. Ussur.* n. 201 (1870); *Homey. J. f. O.* 1870, p. 432; *Gieb. Thes. Orn.* i. p. 350 (1872); *Blakist. Ibis,* 1876, p. 335 (Kamtschatka); *McLeod, Str. Feath.* x. p. 168 (Bhawulpore) (1881); *Tacz. P. Z. S.* 1888, p. 458 (Corea); *Seebh. B. Jap. Emp.* p. 245 (1890); *Brandt, J. f. O.* 1891, p. 268.

Anas falcaria, *Pall. Reise Russ. Reichs,* iii. p. 701, n. 34 (1776); *Gm. S. N.* i. 2, p. 521, n. 86, with var. β (1788); *Lath. Ind. Orn.* ii. p. 860, n. 70 (1790); *Bonn. Enc. Méth.* i. p. 147, pl. 36. f. 5 (1790); *Vieill. N. D.* v. p. 105 (1816); *Dum. Dict. Sc. Nat.* vi. p. 397 (1817); *Steph. Gen. Zool.* xii. 2, p. 100 (1824); *Temm. & Schleg. Faun. Jap., Aves,* p. 127 (Japan) (1850); *Wallengr. Naumannia,* 1854, p. 273 (Skandinavia); *Swinh. Ibis,* 1862, p. 254; *id. P. Z. S.* 1863, p. 324; *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 450 (1871).

Sarcelle de Java, *D'Aubent. Pl. Enl.* n. 930 (♂); *Buff. Hist. Nat. Ois.* ix. p. 275 (1783).

Anas javana, *Bodd. Tabl. Pl. Enl.* 55, n. 930 (1783) (*ex Pl. Enl.*).

Falcated Duck, *Penn. Arct. Zool.* i. p. 574, t. 23 (1785); *Lath. Syn.* iii. 2, p. 516, n. 62 (1785).

Anas javanensis, *Bonn. Enc. Méth.* i. p. 160, pl. 39. f. 3 (1791) (*ex Pl. Enl.* 930).

Anas drepanopteros, *Messerschm. MS., fide Pallas, Zoogr. Rosso-As.* ii. p. 259 (1811).

Querquedula major, *Gmel. sen. MS., fide Pallas, l. c.*

Anas drepanopteros torquata, *Mus. Petrop.* p. 407, n. 650, *fide Pall. l. c.*

Anas falcaria, var., *Vieill. N. D.* v. p. 172 (1816) (*ex Pl. Enl.* 930).

Aix falcaria, *Boie, Isis,* 1828, p. 329.

Querquedula falcaria, *Eyt. Mon. Anat.* p. 126 (1838); *Strickl. P. Z. S.* 1842, p. 167 (China); *G. R. Gr. List B. Brit. Mus.* p. 137 (1844); *Rchnb. Syn. Av.* t. 89. ff. 182 (♂), 413 (♀) (1845); *Licht. Nomencl. Av.* p. 102 (1854); *Swinh. Ibis,* 1861, p. 345 (N. China); *Blakist. Ibis,* 1862, p. 332 (N. Japan); *Swinh. Ibis,* 1863, p. 434 (Formosa ?); *Eyt. Syn. Anat.* p. 78 (1869).

Querquedula falcata, *G. R. Gr. Gen. B.* p. 616, n. 4 (1845); *Bp. Rev. Crit.* pp. 103, 193 (Hungary) (1850); *Gerbe & Degl. Orn. Eur.* ii. p. 526 (1867); *Sharpe & Dress. B. of Eur.* vi. p. 525, pl. 429 (Sweden) (pt. 2, 1871); *Fritsch, J. f. O.* 1872, p. 369 (Boehmia); *Dyb. J. f. O.* 1873, p. 109; *Sclat. P. Z. S.* 1874, p. 152 (Zool. Gard.); *Tacz. J. f. O.* 1874, p. 337, 1875, p. 257 (Ussuri); *Hume, Str. Feath.* iv. p. 225 (Kurnal and Oudh) (1876); *Tacz. Orn. Faun.*

Vost. Sibir. p. 69 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 45 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 214 (Japan); *Anders. Yunn. Exped. Birds*, p. 701 (1878); *Hume, Str. Feath.* vii. p. 494 (Calcutta market) (1879), viii. p. 115, n. 966 bis, p. 411 (India) (1879); *Sclat. P. Z. S.* 1880, p. 521; *Hume & Marsh. Game B. of Ind.* iii. p. 231, pl. 30 (1880); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 105 (1880), x. p. 98 (1882); *Bolau, J. f. O.* 1882, p. 340; *Tacz. Bull. Soc. Zool. Fr.* viii. p. 343 (Kamtschatka) (1883); *Sclat. List Vert. An.* 8th ed. p. 434 (1883); *Blakist. Amend. List B. Jap.* p. 9 (1884); *Madar. Zeitschr. ges. Orn.* i. p. 38 (Hungary) (1884); *Tristr. Cat. Coll. B.* p. 49 (1889); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 91 (1889); *id. Cat. Osteol. Specim. Coll. Sury.* iii. p. 301 (1891).

Querquedula javana, *G. R. Gr. Gen. B.* iii. p. 616, n. 5 (1845).

Querquedula drepanopteros, *Bp. Rev. Crit.* p. 103 (1850).

Querquedula javanensis, *Bp. Compt. Rend.* xliii. p. 650, n. 96 (1856); *Eyt. Syn. Anat.* p. 74 (1869).

Eunetta falcata, *Bp. Compt. Rend.* xliii. p. 650, n. 108 (1856); *Swinh. P. Z. S.* 1871, p. 419; *G. R. Gr. Hand-list*, iii. p. 84, n. 10671 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Swinh. Ibis*, 1873, p. 368, 1874, p. 164 (Hakodadi); *Heugl. J. f. O.* 1874, p. 462; *David & Oust. Ois. Chine*, p. 504 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 104 (Mongolia) (1878); *Seebh. Ibis*, 1884, p. 270 (C. China); *Stejn. Naturen*, 1884, p. 9; *id. Bull. U.S. Nat. Mus.* n. 29, p. 156 (Bering I.) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 136 (Bering I.) (1887); *Gigl. & Salvad. P. Z. S.* 1887, p. 591; *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 118 (1888); *Styan, Ibis*, 1891, pp. 328, 497; *Schal. J. f. O.* 1891, p. 268; *De la Touche, Ibis*, 1892, p. 492.

Mareca falcata, *Cass. Exp. Am. Squadr. China Seas and Jap.* ii. p. 231 (1856); *id. J. f. O.* 1858, p. 448.

Querquedula multicolor, *Swinh.* (*nec Scop.*) *Ibis*, 1860, p. 67 (Amoy).

Anas (Querquedula) falcata, *Schrenk, Vög. Am.-Land*, p. 476 (1860); *Radde, Reis. S. O.-Sibir.* ii. p. 369 (1863); *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 54 (1882).

Nettion falcatum, *Stejn. Pr. U.S. Nat. Mus.* vi. p. 71 (1883).

Adult male. Crown deep chestnut; sides of the head bronze-purple, greener posteriorly; a long green mane on the back of the nape; throat and upper part of the neck white, intersected below by a green collar; mantle and upper scapulars with narrow crescentic bands grey and blackish; rump blackish; basal upper tail-coverts grey, vermiculated with black, the longer ones black and entirely hiding the tail; upper breast waved with alternate crescentic bars of black and white, producing a regular scaly appearance; lower breast whitish, each feather with black bars, one of which is subterminal; sides, flanks, and abdomen waved with narrow black and greyish bands; under tail-coverts black, very long, and reaching beyond the tail; on each side of the under tail-coverts a very distinct buff patch, the bases of the feathers being black, showing a beautiful black bar, which separates the buffy patch from another silky white band formed by the tip of lowest flank-feathers; scapulars grey, narrowly waved with black, and more or less distinctly whitish on the edges; a black patch on the outer scapulars; wing-coverts grey, the last row whitish;

wing-speculum on the secondaries dark glossy green, bounded below by a narrow whitish band at the tip of the secondaries; tertials very long and narrow, sickle-shaped, with the shafts whitish, the webs velvety glossy black, the edges and part of the inner webs grey; quills dark grey, almost blackish towards the tip; under wing-coverts white, but the greater ones grey; axillaries white; tail-feathers grey, with narrow white edges: bill greenish black; feet dull blue-grey, darker on the web; iris brown. Total length 19 inches, wing 10, tail 3, culmen 1·8, tarsus 1·35.

Adult female. Head striped with blackish, each feather margined with fulvous; sides of the face and neck lighter, dotted with small black points and stripes; feathers of the back black, varied with rufous V-shaped marks and edges; rump blackish; upper breast and sides rufous, with black crescentic bars; lower breast and abdomen white, with black crescentic bars or spots, but almost uniform in the middle; under tail-coverts reddish, with blackish marks; upper wing-coverts dusky grey, the greater row whitish at the tip; wing-speculum black, faintly glossed with green; primaries greyish brown; under wing-coverts and axillaries white; tail-feathers brown-grey, with reddish edges: bill, feet, and irides as in the male.

The female resembles that of *Chaulelasmus streperus*, but differs in having the visible portion of all the later secondaries black, with a metallic green reflection, narrowly tipped with white, and the terminal portion of their greater coverts, or last row of the wing-coverts, whitish, while in the female Gadwall the entire visible portions of the later secondaries are pure white, and the terminal portion of their greater coverts black. Besides, the tail-feathers of *E. falcata* ♀ are almost uniform brown-grey, except the reddish edges, while in the female Gadwall the outer tail-feathers are whitish, with irregular brown marks. Finally, the upper mandible of the female *E. falcata* is uniformly dark coloured, whereas in the female Gadwall it is only dark along the culmen and the remainder pale.

Hab. Eastern Asia and Japan; it seldom straggles into the Western Palæarctic Region.

a. ♂ ad. sk.	Omsk, Siberia.	Old Coll.
b. ♂ ad. sk.	Bala Morghab (*Dr. Aitchison*).	Afghan Delimitation Commission [P.].
c. ♂ ad. sk.	Abohur.	Major Cumberland [P.].
d, e. ♂ ♀ ad. sk.	Oudh.	Hume Coll.
f. ♂ ad. sk.	Sultanpur, Gurgaon, Feb. (*W. N. Chill*).	Hume Coll.
g. ♂ ad. sk.	Calcutta, Jan.	Hume Coll.
h. ♂ ad. sk.	Kurnal.	Hume Coll.
i. ♀ ad. sk.	Tapengk, Feb.	Dr. J. Anderson [C.].
k–o. ♂ ♀ ad. st. et sk.	China.	J. R. Reeves, Esq. [P.].
p, q. ♂ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
r. ♂ ad. sk.	Shanghai, China, March.	R. Swinhoe, Esq. [P.].
s, t, u. ♂ ♀ ad. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.

v. ♂ imm. sk.	Shanghai, Feb.	F. W. Styan, Esq. [P.].
w, x, y. ♂ ♀ ad. sk.	Kiukiang, China, Feb.	F. W. Styan, Esq. [P.].
z. ♂ juv. sk.	Peking, China, Oct. (*R. S.*).	Seebohm Coll.
a'. ♀ ad. sk.	S. Manchuria.	H. M. James, Esq. [P.].
b'. ♂ ad. sk.	Awomeri, Japan, April (*Blakiston*).	Seebohm Coll.
c'–f'. ♀ ad. sk.	Nagasaki, Japan, Jan., March.	F. Ringer, Esq. [P.].
g', h', i'. ♂ ♀ ad. et juv. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.

29. CHAULELASMUS.

Type.

Chauliodus, *Sw. Faun. Bor.-Amer., Birds*, p. 440 (1831); *id. Journ. Roy. Inst.* ii. p. 19 (1831) (*nec Bloch*, 1801).

Chauliodes, *Eyt. Mon. Anat.* p. 43 (1838) (*nec Latr.* 1798) C. streperus.

Chaulelasmus, *G. R. Gr., fide Bp. Comp. List B. Eur. & N. Amer.* p. 56 (1838) (= Chauliodus, *Sw.*); *G. R. Gr. Gen. B.* iii. p. 617 (1845).

Ktinorhynchus, *Eyt. Mon. Anat.* p. 137, preface, p. 2 (1838) ..... C. streperus.

Ctenorhynchus, *Agass. Nomencl. Zool., Ind. Univ.* p. 198 (1846).

Chauliodous, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* iv. p. 50 (1888).

Range. Confined to Northern Hemisphere.

Key to the Species.

a. Larger; wing about 11 inches ..... *streperus*, p. 221.
b. Smaller; wing 8 inches (only female known) .... *couesi*, p. 226.

1. Chaulelasmus streperus.

Strepera, *Briss. Orn.* vi. p. 339, tab. xxxiii. f. 1 (1760).

Anas strepera, *Linn. S. N.* i. p. 200, n. 20 (1766); *Gm. S. N.* i. 2, p. 520, n. 20 (1788); *Lath. Ind. Orn.* ii. p. 859, n. 69 (1790); *Bonn. Enc. Méth.* i. p. 138 (1790); *Lath. Tr. Linn. Soc.* iv. p. 111, pl. 13. ff. 7, 8 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 254 (1811); *Wils. Am. Orn.* viii. p. 120, pl. 71 (1814); *Temm. Man.* p. 539 (1815); *Vieill. N. D.* v. p. 135 (1816); *Dum. Dict. Sc. Nat.* vi. p. 365 (1817); *Temm. op. cit.* 2nd ed. ii. p. 837 (1820); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 84 (1823); *Steph. Gen. Zool.* xii. 2, p. 103 (1824); *Bp. Obs. Wils.* n. 257 (1825); *id. Syn.* p. 383 (1828); *Flem. Brit. An.* p. 124 (1828); *Savi, Orn. Tosc.* iii. p. 159 (1831); *Brehm, Vög. Deutschl.* p. 870 (1831); *Sykes, P. Z. S.* 1832, p. 168 (Dukhun); *Aud. Orn. Biogr.* iv. p. 353, pl. 348 (1838); *id. Syn.* p. 278 (1839); *id. B. Am.* vi. p. 254, pl. 388 (1843); *K. & B. Wirbelth. Eur.* pp. lxxxv, 226 (1840); *Naum. Vög. Deutschl.* xi. p. 659, pl. 302 (1842); *Selys-L., Faun. Belg.* i. p. 141 (1842); *Schleg. Rev. Crit.* p. 115 (1844); *Giraud, B. Long. Isl.* p. 304 (1844); *De Kay, N. Y. Zool.* ii. p. 343 (1844); *Degl. Orn. Eur.* ii. p. 430 (1849); *Temm. & Schleg. Faun. Jap.*,

Aves, p. 128 (1850); *Midd. Sibir. Reis.* ii. p. 232 (1853); ? *Passler, J. f. O.* 1853, pp. 242, 312 (Lapland! breeding); *Wallengr. Naumannia*, 1854, p. 272 (Scandinavia); *Newb. P. R. R. Rep.* vi. p. 102 (1857); *Jon., Wedd., & Hurdis, Nat. in Berm.* p. 47 (Bermuda) (1859); *Mart. J. f. O.* 1859, p. 220; *Finsch, J. f. O.* 1859, p. 387 (Bulgaria); *Preen, ibid.* p. 463 (note); *Powys, Ibis*, 1860, p. 353 (Ion. Isl.); *Simps. ibid.* p. 394 (W. Greece); *Swinh. P. Z. S.* 1863, p. 324 (China); *Nordm. J. f. O.* 1864, p. 377; *Schleg. Mus. P.-B.*, Anseres, p. 48 (Cape of Good Hope!) (1866); *Przew. Voy.* n. 203 (1867); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Elwes & Buckl. Ibis*, 1870, p. 340 (Macedonia); *Homeyer, J. f. O.* 1870, p. 432; *Saunders, Ibis*, 1871, p. 396 (S. Spain, breeding); *Taylor, Ibis*, 1872, p. 233 (Crimea); *Shell. B. of Egypt*, p. 283 (1872); *Gieb. Thes. Orn.* i. p. 363 (1872); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Blyth, B. of Burma*, p. 166 (Arakan) (1875); *Sclat. P. Z. S.* 1876, p. 382; *Blanf. East. Pers.* ii. p. 300 (1876); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 262 (W. Siberia); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *C. Swinh. Ibis*, 1882, p. 124; *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 52 (1882); *Tristr. Faun. & Flor. Palest., Aves*, p. 115 (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 370 (1885); *Seebh. Hist. Br. B.* iii. p. 530, pl. 64 (egg) (1855); *Menzb. Ibis*, 1885, p. 357; *A. O. U. Check-list*, p. 115, n. 135 (1886); *Turner, Contr. N. H. Alaska*, p. 131 (1886); *Scully, J. A. S. B.* lvi. p. 88 (1887); *Ridgw. Man. N. Am. B.* p. 95 (1887); *Cory, Auk*, 1888, p. 61 (Cuba and Jamaica, winter); *id. Birds W. Ind.* p. 262 (1889); *Tristr. Cat. Coll. B.* p. 49 (Bermuda) (1889); *Rchnw. J. f. O.* 1890, p. 82; *Lilf. Col. Fig. Br. B.* pt. xv. pl. — (1890); *Seebh. B. Jap. Emp.* p. 242 (1890); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Hatch, B. of Minnes.* p. 41 (1892); *A. Newt. Dict. of Birds*, pt. 1, p. 297 (1893).

Anas cinerea, *S. G. Gm. Reise Russl.* ii. p. 184, t. 17 (♂) (1774); *Brehm, Isis*, 1830, p. 997; *id. Vög. Deutschl.* p. 871 (1831).

Anas kekuschka, *S. G. Gm. Reise*, iii. p. 249, tt. 26, 27 (Caspian Sea) (1774); *Gm. S. N.* i. 2, p. 531, n. 102 (1788); *Lath. Ind. Orn.* ii. p. 877, n. 112 (1790); *Bonn. Enc. Méth.* i. p. 153 (1791); *Vieill. N. D.* v. p. 122 (1816); *Dum. Dict. Sc. Nat.* vi. p. 379 (1817); *Steph. Gen. Zool.* xii. 2, p. 110 (1824).

Gadwall, *Penn. Brit. Zool.* ii. p. 603, n. 288 (1776); *Lath. Syn.* iii. 2, p. 515, n. 61 (1785).

Anatra canapiglia, *Gerini, Stor. Ucc.* v. tav. 574, 575 (1776).

Chipeau, *D'Aubent. Pl. Enl.* p. 958; *Buff. Hist. Nat. Ois.* ix. p. 187, pl. 12 (♀) (1783).

Anas (Chauliodus) strepera, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 440 (1831); *Jen. Man.* p. 231 (1835).

Chauliodus strepera, *Sw. Journ. Roy. Inst.* ii. p. 19 (1831); *Thomps. P. Z. S.* 1834, p. 30 (Ireland); *Eyt. Cat. Br. B.* p. 60 (1836); *Sw. Class. B.* ii. p. 366 (1837); *Eyt. Mon. Anat.* p. 43 (1838); *Jerd. Madr. Journ.* xii. p. 220, n. 381 (1840); *Ever, P. Z. S.* 1842, p. 93; *Blyth, ibid.* p. 94; *Denny, P. Z. S.* 1847, p. 40.

Anas (Boschas) strepera, *Nutt. Man.* ii. p. 383 (1834).

Chauliodes strepera, *Gould, B. of Eur.* v. pl. 366 (1837); *Radde, Ornis Caucas.* p. 434 (1884).

Chaulelasmus streperus, *G. R. Gr.*(ubi?); *Bp. Comp. List*, p. 56 (1838); *Fraser, P. Z. S.* 1839, p. 134 (Erzeroom); *G. R. Gr. List Gen. B.* p. 74 (1840); *id. List B. Brit. Mus.* iii. p. 139 (1844); *id. Gen. B.*

iii. p. 617, n. 1 (1845); *id. Cat. Hodgs. Coll. B. M.* p. 145 (1846); *Gosse, B. Jam.* p. 408 (1847); *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1777 (1849); *Rchnb. Syst. Av.* p. x (1852); *Woodh. Sitgr. Rep.* p. 104 (1853); *Bp. Compt. Rend.* xl. p. 664 (1853), xliii. p. 650, n. 80 (1856); *Heugl. Syst. Ueb.* n. 693 (1856); *Brehm, J. f. O.* 1857, p. 357; *Baird, B. N. Am.* p. 782 (1858); *id. Cat. N. Am. B.* n. 584 (1859); *Heerm. P. R. R. Rep.* x. pt. vi. p. 69 (1859); *Salv. Ibis*, 1859, p. 363 (E. Atlas); *Homey. J. f. O.* 1859, p. 373 (Zool. Gard.); *Tristr. Ibis*, 1860, p. 81 (N. Afr.); *Coop. & Suckl. N. H. Wash. Terr.* p. 256 (1860); *Albrecht, J. f. O.* 1862, p. 207 (Jamaica); *Blakist. Ibis*, 1863, p. 146 (Br. N. Am.); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *March, Pr. Ac. Philad.* 1864, p. 72 (Jamaica); *Tristr. P. Z. S.* 1864, p. 453; *Jerd. B. of Ind.* iii. p. 802 (1864); *More, Ibis*, 1865, p. 442; *Dress. Ibis*, 1866, p. 43 (Texas); *Coues, Pr. Ac. Philad.* 1866, p. 99 (Arizona); *Gundl. Rep. Fis.-Nat.* i. p. 389 (Cuba) (1866); *Lawr. Ann. Lyc. N.Y.* viii. (1866), p. 297 (1867); *Bear. Ibis*, 1868, p. 402 (India); *Brown, ibid.* p. 426 (Vancouver); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (1869); *Swinh. P. Z. S.* 1871, p. 418 (China); *Goebel, J. f. O.* 1871, p. 147 (Umanschen Kreise); *Gundl. J. f. O.* 1871, pp. 292, 294 (Cuba); *Fritsch, J. f. O.* 1872, p. 369; *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Merr. U.S. Geol. Surv. Terr.* p. 704 (Idaho) (1872); *Allen, Bull. M. C. Z.* iii. p. 183 (Colorado) (1872); *Aiken, Pr. Bost. Soc.* xv. p. 240 (Colorado) (1872); *Coues, Key*, p. 286 (1872); *id. Check-list*, n. 491 (1873); *Alst. & H. Brown, Ibis*, 1873, p. 70 (Archangel); *Lloyd, ibid.* p. 420 (Kattiawar); *Snow, B. Kans.* p. 11 (1873); *Hume & Henders. Lahore to Yark.* p. 296 (1873); *Dress. B. Eur.* vi. p. 487, pl. 424 (pt. xxiii., 1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1327 (1873); *Coues, B. N.-West*, p. 563 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (1874); *Gundl. J. f. O.* 1875, p. 381 (Cuba); *Dress. Ibis*, 1876, p. 419; *David & Oust. Ois. Chine*, p. 499 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 105 (Mongolia) (1878); *Blakist. & Pryer, Ibis*, 1878, p. 214 (Yokohama); *Hume, Str. Feath.* viii. p. 115, n. 961 (1879); *Scully, ibid.* p. 362 (Nepal) (1879); *Sclat. P. Z. S.* 1880, p. 519; *Hume & Marsh. Game Birds*, iii. p. 181, pl. 24 (1880); *Bidd. Ibis*, 1881, p. 100 (Gilgit); *Ridgw. Nom. N. Am. B.* n. 604 (1881); *Coues, Check-list*, 2nd ed. p. 113, n. 711 (1882); *Salv. Cat. B. Strickl. Coll.* p. 534 (1882); *Blak. & Pryer, Tr. As. Soc. Jap.* x. p. 98 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 52 (1882); *B. O. U. List Br. B.* p. 125 (1883); *Sclat. List Vert. An.* 8th ed. p. 432 (1883); *Oates, B. of Br. Burma*, ii. p. 283 (1883); *Marsh. Ibis*, 1884, p. 424 (Chamba); *B., B., & R. Water-Birds N. Am.* i. p. 506 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 693 (1884); *Sharpe, Layard's B. S. Afr.* p. 759 (Orange River) (1884); *Nehrl. J. f. O.* 1885, p. 146 (Illinois); *Salvad. El. Ucc. Ital.* p. 258 (1886); *Tait, Ibis*, 1887, p. 376 (Portugal); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Bering I.) (1887); *St. John, Ibis*, 1889, p. 129 (Afghanistan); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 91 (1889); *id. Sec. Yark. Exp., Aves*, p. 131 (1891); *id. Cat. Osteol. Specim. Coll. Surg.* iii. p. 301 (1891); *Styan, Ibis*, 1891, pp. 328, 496; *Dub. Faun. Belg., Ois.* ii. p. 438, pl. 254 (1892); *Oust. Ois. Turkest. etc.* (*Nouv. Arch. Mus.* (3) vi. *Extr.* p. 99) (1894); *Rickett, Ibis*, 1894, p. 224 (China).

Ktinorhynchus streperus, *Eyt. Mon. Anat.* p. 137 (1838).

Querquedula strepera, *Macgill. Man. Orn.* ii. p. 109 (1842); *id. Hist. Br. B.* v. p. 59 (1852).

Ktiuorhynchus strepera, *Hartl. Verz. Ges. Mus.* p. 120 (1844).
Anas mail, *Hodgs. Gray's Zool. Misc.* p. 81, n. 500 (♀) (1844).
Chaulelasmus strepera, *Rchnb. Syn. Av.*, Natatores, t. 92. ff. 165–167 (1845); *Licht. Nomencl. Av.* p. 100 (1854); *Bolle, J. f. O.* 1855, p. 314 (Spain); *Degl. & Gerbe, Orn. Eur.* ii. p. 510 (1867); *Gould, B. Great Brit.* v. pl. 19 (pt. xiii., 1868); *Eyt. Syn. Anat.* p. 93 (1869); *Tacz. J. f. O.* 1870, p. 55; *G. R. Gr. Hand-list*, iii. p. 84, n. 10674 (1871); *Dyb. J. f. O.* 1873, p. 110, 1874, p. 337; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 46 (1877); *Madar. Zeitschr. ges. Orn.* i. p. 39 (1884).
Chaulelasmus cinereus, *Brehm, Vogelf.* p. 373 (1855); *id. Naumannia*, 1855, p. 297.
Chaulelasmus americanus, *Gray* (ubi ?), *fide Brehm, Vogelf.* p. 374 (1855); *id. Naumannia*, 1855, p. 297.
Chaulelasmus streperus, *b.* americanus, *Bp. Compt. Rend.* xliii. p. 650 (1856).
Anas strepera americana, *Wied, J. f. O.* 1859, p. 169.
Anas (Chauliodes) strepera, *Radde, Reis. S. O.-Sibir.* ii. p. 370 (1863).
Anas streperus, *Cory, List B. W. Ind.* p. 30 (1885).
Chauliodous streperus, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* iv. p. 50 (1888).

Adult male. Upper part of the head reddish brown, indistinctly speckled with darker brown; sides of the head and upper neck whitish, the latter with a rusty tinge, both thickly speckled with brown; an indistinct brown band behind the eyes; mantle and scapulars grey, thickly waved with blackish; lower back uniform brown, changing into velvety black on the rump, upper and under tail-coverts; lower neck in front and on the sides and upper breast with blackish and white crescent-like bars on each feather, producing a scale-like appearance; lower breast and upper part of the abdomen white; sides and flanks thickly waved with blackish and greyish bands, which extend on the sides of the vent; smaller wing-coverts brownish grey, the median ones chestnut, the greater velvety black; wing-speculum velvety black outwardly, inwardly white; primaries brownish grey; primary-coverts and tertiaries grey; under wing-coverts and axillaries white; tail-feathers greyish, with the tips whitish: "bill lead-colour; irides hazel; legs, toes, and their membranes dull orange" (*Farrell*). Total length about 21 inches, wing 11, tail 4, culmen 1·9, tarsus 1·5.

Female. General colour dark brown, each feather with a buff margin, except the scapulars, the feathers of the rump, which are brownish black, and the wings, which resemble those of the adult male, except that the reddish chestnut is confined to a few of the median wing-coverts. The general colour of the underparts is white, suffused with rufescent on the breast and flanks, which, together with the under tail-coverts, are spotted with dark brown.

Young in first plumage. Closely resembles the adult female, but there is no chestnut or black on the wings, the white on the secondaries is dull, and the whole of the feathers of the underparts have obscure, ill-defined, brown centres.

Males not quite in full dress have a very distinct reddish tinge on the throat and lower part of the neck.

Young in down resemble those of the Mallard, "but there is a more pronounced golden tinge on the throat and cheeks, the streak through the eye is more defined, and there is a small dark spot at the junction of the mandibles, which the Mallard has not" (*Yarrell*).

Hab. Northern Hemisphere, breeding in subarctic regions of both continents, extending south during winter as far as Abyssinia and Shoa, but not as far as the Cape (?), Palestine, India, Arakan, China, and Japan; in America as far south as Mexico and Jamaica.

a, *b*, *c*. ♂ ♀ ad. st.	Great Britain.	Purchased.
d. ♂ ad. sk.	I. of Tiree, Nov.	Col. Irby & Capt. Reid [P.].
e. ♂ ad. sk.		Tweeddale Coll.
f–*o*. ♂ ♀ ad., ♂ imm. sk., et pull. st.	Merton, Norfolk, June, July.	Lord Walsingham [P.].
p. Imm. sk.	Pembrokeshire.	Earl of Cawdor [P.].
q. ♀ ad. sk.	Aldeburgh, Suffolk, Aug.	Theodore Fisher, Esq. [P.].
r. ♂ ad. sk.	Kent.	Montagu Coll.
s. ♂ ad. sk.	Hastings Market, April.	H. J. Elwes, Esq. [P.].
t, *u*. ♂ ♀ ad. sk.	London Market.	Purchased.
v, *w*. ♂ ad. et ♀ imm. sk.	Egypt, Feb. (*G. E. S.*).	Shelley Coll.
x, *y*. ♂ juv. sk.	Lenkoran.	Seebohm Coll.
z. ♂ ad. sk.	Teheran, 4000 ft., Persia.	W. T. Blanford, Esq. [E.].
a'–*d'*. ♂ ♀ ad. sk.	Lob-nor, Feb. (*Prjevalsky*).	Seebohm Coll.
e', *f'*. ♂ ad. et ♂ juv. sk.	Bala Morghab, Jan., Feb. (*Aitchison*).	Afghan Delimitation Commission [P.].
g'–*i'*. ♂ ad. sk.	Kandahar, Feb., Mar.	Lt.-Col. Swinhoe [P.].
k'. ♀ juv. sk.	R. Jhelum, near Shahpoor, Nov. (*A. O. H.*).	Hume Coll.
l', *m'*. ♂ ad. sk.	Hamal Mehur, Jan.	Hume Coll.
n'. ♂ ad. sk.	Mehur, Upper Sind, Jan. (*A. O. H.*).	Hume Coll.
o'–*s'*. ♂ ad. et ♂ juv. sk.	Sambhur, Feb., March, Nov. (*R. M. Adam*).	Hume Coll.
t'. ♂ ad. st.	Gwalior.	C. Maries, Esq. [P.].
u'. ♀ ad. sk.	Ajmere, Dec. (*A. O. H.*).	Hume Coll.
v', *w'*. ♂ imm. sk.	Sirza.	Hume Coll.
x', *y'*, *z'*. ♂ ♀ ad. et ♂ imm. sk.	Gurgaon, Feb. (*W. N. Chill*).	Hume Coll.
a''–*e''*. ♂ ♀ ad. et juv. sk.	Etawah, Nov.	Hume Coll.
f'', *g''*. ♂ ad. et ♂ juv. sk.	Futtehgurh, Feb. (*A. Anderson*).	Seebohm Coll.
h''. ♂ ad. sk.	Phoolpore, near Allahabad, Feb.	Hume Coll.
i''. ♂ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
k'', *l''*. ♂ ad. sk.	Oudh, Dec., Jan.	Hume Coll.
m'', *n''*, *o''*. ♀ ad. et ♂ juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].

p''-*v''*. ♂ ♀ ad. et juv. sk.	Native Sikhim, Feb., March, Nov. (*L. Mandelli*).	Hume Coll.
w''. ♂ ad. sk.	Dipur Bheel, Assam, Feb. (*A. W. Chennell*).	Tweeddale Coll.
x''. ♂ ad. sk.	Dinapore, Jan.	Hume Coll.
y'', *z''*. ♂ ad. st. et ♀ ad. sk.	Deccan (*Sykes*).	India Museum [P.].
a^3-d^3. ♂ ♀ ad. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.
e^3, f^3. ♂ ♀ ad. sk.	Yokohama, Jan. (*H. Pryer*).	Seebohm Coll.
g^3. ? ♂ juv. st.	Behring Straits.	Capt. Kellett & Lieut. Wood [P.].
h^3. ♂ ad. st.	N. America.	J. E. Gray, Esq. [P.].
i^3. ♂ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
k^3. ♀ ad. sk.	West side Rocky Mts.	J. K. Lord, Esq. [P.].
l^3. ♂ juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
m^3. ♀ juv. sk.	Warner Lake, Oregon, Sept.	Salvin-Godman Coll.
n^3. Juv. sk.	Washoe Lake, Nevada, Nov.	Salvin-Godman Coll.
o^3. ♂ ad. sk.	Mississippi Valley, April.	Salvin-Godman Coll.
p^3. ♂ juv. sk.	San Antonio, Texas, winter (*H. E. Dresser*).	Salvin-Godman Coll.
q^3-b^4. ♂ ♀ ad. et juv. sk.	Corpus Christi, Texas, Oct., Dec., Jan. (*F. B. Armstrong*).	Salvin-Godman Coll.
c^4. ♂ ad. sk.	Los Angeles, California.	Salvin-Godman Coll.
d^4. ♂ juv. sk.	Presidio, Mexico, Feb. (*A. Forrer*).	Salvin-Godman Coll.
e^4, f^4, g^4. ♂ ♀ ad. sk.	Zacatecas, Mexico, April (*W. B. Richardson*).	Salvin-Godman Coll.
h^4, i^4, k^4. Pull. st.		Zool. Soc.
l^4. Pull. st.	No locality.	
m^4. Skeleton (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].
n^4. Sternum and shoulder-girdle.		

2. Chaulelasmus couesi.

? Anas strepera, *Forst. Descr. An.* p. 156 (Tahiti) (1844); *Hartl. Wiegm. Arch.* 1852, i. p. 136.

Chaulelasmus strepera, var. (?), *G. R. Gr. Cat. B. Trop. Isl.* p. 55 (Society Islands, New Caledonia !) (1859).

Chaulelasmus couesi, *Streets, Bull. Nutt. Orn. Club*, i. p. 46 (Washington and New York Islands) (1876); *id. Bull. U.S. Nat. Mus.* no. 7, p. 21 (1877); *id. Amer. Nat.* xi. p. 68 (1877); *Sclat. P. Z. S.* 1880, p. 520 (Fanning Islands); *B., B., & R. Water-B. N. Am.* i. p. 505 (note) (1884); *Wiglesw. Aves Polyn.* p. 70 (1891); *A. Newt Dict. of B.* pt. i. p. 298 (1893).

Anas couesi, *Seebh. Hist. Br. B.* iii. p. 531 (1885).

Only known from immature specimens.

It is "presumed that the *adults* will show the peculiar vermiculated appearance of *C. streperus*." The *immature* birds "resemble the immature condition of *C. streperus* so closely that one description of the coloration would answer for both species; but *C. couesi* is

immediately distinguished by its greatly inferior size, which hardly exceeds that of a Teal, the different colour of the bill and feet (black, somewhat lighter on the inner side of the tarsus), and the singular discrepancy in the lamellæ of the bill; these are small and closely packed, about 75 in number, while in *streperus* are only about 50. Length 17 inches, wing 8, culmen 1·45, tarsus 1·40." (*Streets.*)

Hab. Washington and New York Islands, Fanning Group.

30. MARECA.

	Type.
Mareca, *Steph. Gen. Zool.* xii. 2, p. 130 (1824)	M. penelope.
Penelops, *Kaup, Natürl. Syst.* p. 31 (1829)	M. penelope.
Marica (*errore?*), *Leach, fide Sw. Class. B.* ii. p. 366 (1837).	

Range. Palæarctic, Nearctic, and Neotropical regions.

Key to the Species.

A wide white patch on the upper wing-coverts; central tail-feathers rather acuminate; bill rather small; lamellæ scarcely prominent.

a. Upper tail-coverts grey, the outer feathers black; under tail-coverts glossy black in males.

a'. Upper part of the head buff; remainder of the head and upper neck chestnut; female with the head brown-chestnut, spotted with black ..... *penelope*, p. 227.

b'. Upper part of the head whitish; sides of the head and upper neck whitish, with black spots; female with the head and upper neck whitish, spotted with black ..... *americana*, p. 233.

b. Upper tail-coverts white; under tail-coverts white, tinged with chestnut; hind part of the head and nape glossy green, with blue lustre, especially on the nape ..... *sibilatrix*, p. 236.

1. Mareca penelope.

The Wigeon.

Penelops, *Gesn. Av.* p. 108.

Anas fistularis, *Briss. Orn.* vi. p. 391, t. xxxv. f. 2 (♂) (1760); *Brehm, Isis*, 1830, p. 997; *id. Handb. Vög. Deutschl.* p. 874 (1831); ? *Denny, P. Z. S.* 1847, p. 40.

Anas penelops, *Linn. S. N.* i. p. 202, n. 27 (1766).

? Anas melanura, *Scop. Ann. I. H. N.* p. 66, n. 82 (1769).

Anas cogolca, *S. G. Gm. Reis.* i. p. 70 (1770).

Anas kogolca, *S. G. Gm. Nov. Comm. Petrop.* xv. p. 468, t. 21 (1771); *Gm. S. N.* i. 2, p. 527 β (1788); *Vieill. N. D.* v. p. 122 (1816); *Dum. Dict. Sc. Nat.* vi. p. 376 (1817).

Anatra marigiana, *Gerini, Stor. degli Ucc.* v. tt. 585, 586 (1776).

Canard siffleur, *D'Aubent. Pl. Enl.* 825 (♂); *Buff. Hist. Nat. Ois.* ix. p. 169, pls. 10, 11 (1783).

Wigeon, *Lath. Syn.* iii. 2, p. 518, n. 63 (1785).

Anas penelope, *Gm. S. N.* i. 2, p. 527, n. 27 (1788); *Lath. Ind. Orn.* ii. p. 860, n. 71 (1790); *Bonn. Enc. Méth.* i. p. 141, pl. 34. f. 4 (1790); *Lath. Tr. Linn. Soc.* iv. p. 111, t. xiii. f. 9 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 251 (1811) (Russia, Siberia, Kamtschatka); *Temm. Man. d'Orn.* p. 542 (1815); *Leach, Cat.* p. 37 (1816); *Vieill. N. D.* v. p. 150 (1816); *Dum. Dict. Sc. Nat.* vi. p. 366 (1817); *Temm. Man. d'Orn.* 2nd ed. ii. p. 840 (1820); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 84 (Iceland, Egypt) (1823); *Brehm, Eur. Vög.* p. 768 (1823); *Flem. Br. Anim.* p. 124 (1828); *Brehm, Isis*, 1830, p. 997; *id. Handb. Vög. Deutschl.* p. 874 (1831); *Less. Tr. d'Orn.* p. 634 (1831); ? *Wagl. Isis*, 1831, p. 532 (Mexico); *Savi, Orn. Tosc.* iii. p. 146 (Italy) (1831); *Nordm. in Ermann's Verz. Th. Pfl.* p. 18 (1835); *Thienem. Syst. Darstell. d. Fortpfl. Vög. Eur.* 5 Abth. p. 34, t. xxiv. f. 5 (1838); *Temm. Man.* iv. p. 532 (1840); *Keys. & Blas. Wirbelth. Eur.* pp. lxxxiv, 223 (1840); *Naum. Vög. Deutschl.* xi. p. 724, t. 305 (1842); *Selys-L. Faun. Belg.* p. 142 (1842); *Schleg. Rev. Crit.* p. cxiv (1844); *DeKay, N. Y. Zool.* ii. p. 436 (1844); *Giraud, B. Long Isl.* p. 307 (1844); *Degl. Orn. Eur.* ii. p. 431 (1849); *Temm. & Schleg. Faun. Jap., Aves*, p. 127 (1850); *Midd. Sibir. Reise*, ii. 2, p. 229 (1853); *Pässl. J. f. O.* 1853, pp. 242, 318 (Lapland); *Schill. ibid.* p. 337; *Wallengr. Naumannia*, 1854, p. 271 (Scandinavia); *Reinh. J. f. O.* 1854, pp. 426, 441; *Thienem. Fortpflanzungsg. ges. Vög.* t. lxxx. f. 6 (1856); *Kittl. Denkw.* ii. p. 292 (1858); *Simpson, Ibis*, 1860, p. 394 (Greece); *Reinh. Ibis*, 1861, p. 13 (Greenland); *Swinh. P. Z. S.* 1863, p. 324 (China); *Wright, Ibis*, 1864, p. 155 (Malta); *Nordm. J. f. O.* 1864, p. 377 (Finland, Lapland); *Blyth, B. of Burma*, p. 166 (Arakan, Hainan) (1865); *Schleg. Mus. P.-B.*, Anseres, p. 44 (1866); *Przew. Voy.* n. 199 (1867); *Dyb. & Parr. J. f. O.* 1868, p. 338 (Dauria); *Müll. & Droste, J. f. O.* 1869, p. 346 (Faroe Is.); *Elwes & Buckl. Ibis*, 1870, p. 339 (Turkey); *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 449 (1871); *Gieb. Thes. Orn.* i. p. 359 (1872); *Heugl. Ibis*, 1872, p. 64 (Waigats Is.); *Tayl. ibid.* p. 233 (Crimea); *Fischer, J. f. O.* 1872, p. 390 (St. Petersburg); *Severtz. Turk. Jevotn.* p. 70 (1873); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 263; *Seebh. Hist. Br. B.* iii. p. 539 (1885); *Scully, J. A. S. B.* lvi. p. 88 (1887); *Bryant, For. & Str.* xxvi. no. 22, p. 426 (California) (1887); *Saunders, Man. Brit. B.* p. 425 (1889); *Rehnw. J. f. O.* 1890, p. 82; *Seebh. B. Jap. Emp.* p. 247 (1890); *Hartert, Kat. Vogelsamml.* p. 230 (1891).

? Anas melanura, *Gm. S. N.* i. 2, p. 516, n. 74 (1788) (*ex Scopoli*); *Lath. Ind. Orn.* ii. p. 861, n. 72 (1790); *Bonn. Enc. Méth.* i. p. 153 (1791); *Bechst. Orn. Taschenb.* ii. p. 453 (1803); *Vieill. N. D.* v. p. 155 (1816); *Dum. Dict. Sc. Nat.* vi. p. 369 (1817).

Anas penelope β, *Lath. Ind. Orn.* ii. p. 861 (1790).

Canard Kogolka, *Bonn. Enc. Méth.* i. p. 142 (1790).

Mareca fistularis, *Steph. Gen. Zool.* xii. 2, p. 131, pl. 50 (1824); *Sykes, P. Z. S.* 1832, p. 168, *Cat.* n. 219 (Dukhun); *Eyt. Mon. Anat.* p. 118 (1838); *Jerd. Madr. Journ.* xii. p. 219, n. 380 (1840); *Eyt. Syn. Anat.* p. 70 (1869).

? Mareca melanura, *Steph. Gen. Zool.* xii. 2, p. 134 (1824).

Penelops penelops, *Kaup, Natürl. Syst.* p. 31 (1829).

Anas kagolca, *Brehm, Isis*, 1830, p. 997; *id. Handb. Vög. Deutschl.* p. 872 (1831).

Mareca penelope, *Selby, Br. Orn.* ii. p. 324 (1833); *Jen. Man.* p. 236 (1835); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.*

pl. 359 (1837); *Bp. Comp. List*, p. 56 (1838); *Strickl. P. Z. S.* 1842, p. 168 (China); *Macgill. Man.* ii. p. 174 (1842); *Hartl. Verz. Ges. Mus.* p. 118 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 133 (1844); *id. Gen. B.* iii. p. 614, n. 1 (1845); *Rüpp. Syst. Uebers.* p. 138 (Egypt, Abyssinia) (1845); *Rchnb. Syn. Av.*, Natatores, t. 92. ff. 168, 169 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 145 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 305, n. 1778 (1849); *Harcourt, P. Z. S.* 1851, p. 146 (Madeira); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Harcourt, Ann. & Mag. N. H.* xii. p. 63 (Madeira) (1853); *Licht. Nomencl. Av.* p. 101 (1854); *Hartl. J. f. O.* 1854, p. 160 (Ceylon!)*; *Bp. Compt. Rend.* xliii. p. 650, n. 117 (1856); *Cassin, Narr. Exp. Am. Squadr. etc.* ii. p. 231 (Hakodadi) (1856); *Baird, B. N. Am.* p. 784 (1858); *id. Cat. N. Am. B.* n. 586 (1859); *Salv. Ibis*, 1859, p. 364; *Homey. J. f. O.* 1859, p. 372; *Finsch, ibid.* p. 386 (Bulgaria); *Roget, Rev. et Mag. de Zool.* 1859, p. 145, pl. 6 (var.); *Tristr. Ibis*, 1860, p. 81; *Powys, ibid.* p. 353 (Ionian Isl.); *Swinh. Ibis*, 1861, p. 345 (N. China), 1863, p. 434 (Formosa); *G. R. Gr. List Br. B.* p. 191 (1863); *id. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 76 (1863); *Tristr. P. Z. S.* 1864, p. 453 (Jordan); *Jerd. B. of Ind.* iii. p. 804 (1864); *More, Ibis*, 1865, p. 444 (Great Britain); *Whitely, Ibis*, 1867, p. 207 (Hakodadi); *Swinh. ibid.* p. 399; *Lawr. Ann. Lyc. N.Y* viii. p. 297 (1867); *Degl. & Gerbe, Orn. Eur.* ii. p. 512 (1867); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Coues, Pr. Ess. Inst.* v. p. 299 (New England) (1868); *Tacz. J. f. O.* 1870, p. 55 (Constantina); *Swinh. Ibis*, 1870, p. 366; *id. P. Z. S.* 1871, p. 418; *Saund. Ibis*, 1871, p. 397 (Spain); *Goebel, J. f. O.* 1871, pp. 21, 22, 23, 24, 148; *G. R. Gr. Hand-list*, iii. p. 81, n. 10628 (1871); *Gould, B. Gr. Brit.* v. pl. 13 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Shell. B. of Egypt*, p. 288 (1872); *Coues, Key*, p. 268 (1872); *id. Check-list*, n. 492 (1873); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 5 (1873); *Hume, Str. Feath.* i. p. 271 (Sindh) (1873); *Alst. & H. Brown, Ibis*, 1873, p. 71 (Archangel); *Brooke, ibid.* p. 343 (Sardinia); *Dyb. J. f. O.* 1873, p. 110; *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1309 (1873); *Coues, B. N.-West*, p. 564 (1874); *Tacz. J. f. O.* 1874, p. 337; *Swinh. Ibis*, 1875, p. 457 (Hakodadi); *Coues in Elliott's Affairs Alaska*, p. 191 (1875); *Harting, Fauna Prybil. Isl.* p. 29 (1875); *Butl. Str. Feath.* iv. p. 30 (1876); *Hume, ibid.*; *B. Wharton, Ibis*, 1876, p. 28 (Corsica); *Dress. Ibis*, 1876, p. 420; *id. B. of Eur.* vi. p. 541, pls. 432, 433 (pt. 48, 1876); *Blanf. East. Pers.* ii. p. 301 (1876); *Sharpe, Ibis.* 1877, p. 24 (Borneo); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 46 (1877); *id. Orn. Faun. Vost. Sibir.* p. 70 (1877); *David & Oust. Ois. Chine*, p. 499 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 101 (Mongolia) (1878); *Blakist. & Pryer, Ibis*, 1878, p. 213 (Japan); *Lawr. Bull. Nutt. Orn. Club*, iii. p. 98 (1878); *Berier, op. cit.* iv. p. 190 (N. Carolina) (1879); *Hume, Str. Feath.* vii. p. 494 (Calcutta) (1879); *id. op. cit.* viii. p. 115, n. 963 (1879); *Deane, Bull. Nutt. Orn. Club*, v. p. 126 (N. Carolina, Virginia) (1880); *Sclat. P. Z. S.* 1880, p. 574; *Finsch, Ibis*, 1880, pp. 332, 333 (Taluit, Marshall I.); *Hume & Marsh. Game-Birds of Ind.* iii. p. 197, pl. 26 (1880); *Ridgw. Nom. N. Am. B.* n. 606 (1881); *Cecil Smith. Zool.* 1881, p. 448; *Hume, Str. Feath.* x. p. 245 note (Pegu) (1882); *C. Swinh. Ibis*, 1882, p. 124 (Kandahar); *Coues, Check-list*, 2nd ed. p. 113,

* Not mentioned in Legge's 'Birds of Ceylon.'

n. 712 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 97 (1882); *Elliott, Mon. Seal-Isl.* p. 130 (Prybilov Isl.) (1882); *Salv. Cat. B. Strickl. Coll.* p. 532 (1882); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883); *B. O. U. List Br. B.* p. 123 (1883); *Sclat. List Vert. An.* 8th ed. p. 436 (1883); *Nels. Cruise 'Corwin,'* p. 96 (1883); *Oates, B. Brit. Burm.* ii. p. 278 (1883); *Blakist. Chrysanth.* 1883, p. 27; *id. Amend. List B. Jap.* p. 9 (1884); *Tristr. Faun. & Flor. of Palest.* p. 116 (1884); *Radde, Ornis Caucas.* p. 456 (1884); *B., B., & R. Water-B. N. Am.* i. p. 517 (1884); *Cones, Key N. Am. B.* 2nd ed. p. 694 (1884); *Madar. Zeitschr. d. ges. Orn.* i. p. 34 (1884); *Finsch, Mitth. orn. Ver. Wien*, 1884, p. 127; *Saund. Yarrell's Hist. Br. B.* iv. p. 397 (1884–85); *Chapm. Ibis*, 1885, p. 169 (Lapland); *Reid, ibid.* p. 256 (Marocco); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 157 (Bering I.) (1885); *Salvad. El. Ucc. Ital.* p. 259 (1886); *Tait, Ibis*, 1887, p. 377 (Portugal); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Commander I.) (1887); *Ridgw. Man. N. Am. B.* p. 96 (1887); *Nels. Nat. Hist. Coll. in Alaska*, p. 67 (1887); *Tacz. P. Z. S.* 1888, p. 640 (Corea); *Gurn. Ibis*, 1888, pp. 228, 230; *Koenig, J. f. O.* 1888, p. 296 (Tunis); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 131 (Japan) (1888); *Lilford, Ibis*, 1889, p. 346 (Cyprus); *Tristr. Cat. Coll. B.* p. 50 (1889); *Everett, Journ. Str. Br. R. As. Soc.* 1889, p. 192 (Borneo); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 92 (1889); *id. Ibis*, 1890, pp. 148, 285 (Borneo); *Russell, Zoolog.* (3) xiv. pp. 62–69 (Essex) (1890); *Lilf. Col. Fig. Br. B.* pt. xv. pl. — (1890); *Evans, Ibis*, 1891, p. 72 (incubation); *Sharpe, ibid.* p. 116 (Fao); *Styan, ibid.* pp. 328, 496; *Wiglesw. Aves Polyn.* p. 71 (Marshall Is.) (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 302 (1891); *Dub. Faun. Vert. Belg., Ois.* ii. p. 441, pl. 225 (1892); *De la Touche, Ibis*, 1892, p. 492; *Meade-Waldo, Ibis*, 1893, p. 199 (Canaries).

Anas? vitticeps, *Hodgs. Gray's Zool. Misc.* p. 86, n. 677 (♀) (1844).

Fuligula? chesnea, *Hodgs. Gray's Zool. Misc.* p. 86, n. 458 (♂) (1844).

Mareca kagolka, *Brehm, Naumannia*, 1855, p. 297; *id. Vogelf.* p. 373 (1855).

Mareca fistulans, *Brehm, Naumannia*, 1855, p. 297; *id. Vogelf.* p. 373 (1855).

Anas (Mareca) penelope, *Schrenck, Vög. d. Amur-Land*, p. 471 (1860); *Radde, Reise S. O.-Sibir.* ii. p. 363 (1863); *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 53 (1882).

Marica fistularis, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* fasc. iv. p. 9 (1888).

Hybrids.

Anas boschas? × Mareca penelope?, *Sclat. P. Z. S.* 1861, p. 101.

Mareca penelope ♂ × (Anas boschas fera × A. boschas domestica) ♀, *A. Newt. P. Z. S.* 1861, p. 392.

Querquedula bimaculata, *G. R. Gr. Cat. Brit. B.* p. 194, specim. *c* (1863).

Mareca penelope? × Querquedula crecca, *Sclat. P. Z. S.* 1864, p. 727; *id. List Vert. An.* 8th ed. p. 436 (1883); *Arrig. degli Oddi, Atti Soc. Ital. Sc. Nat.* xxxiii. p. 17 (1890).

Wigeon ♂ × Pintail ♀, *Yarrell's Hist. Br. B.* (*Saund. ed.*) iv. pp. 303 401 (1884–85).

Anas penelope × A. acuta, *Cromm. N. T. D.* ii. p. 296 (1865); *Leverk. J. f. O.* 1890, pp. 210, 230.
Anas penelope × A. creeca, *Leverk. J. f. O.* 1890, p. 230.

Adult male. Forehead and top of the head buff, rest of the head and neck cinnamon, minutely spotted, especially round the eyes, with bottle-green; chin and throat more or less black; mantle, back, and scapulars grey, crossed with irregular zigzag lines of black; central tail-feathers paler, almost whitish; lateral tail-feathers like the under tail-coverts, black; lower fore neck and sides of the breast vinaceous; middle of the breast and abdomen white; sides, flanks, and under wing-coverts grey, with zigzag lines like the back; wing-coverts white, the largest tipped with black; primaries uniform dark brown; outer webs of the secondaries green, forming a speculum, edged with black; black outer webs of the secondaries broadly edged with white; tail-feathers elongated, pointed, and nearly black: irides dark brown; bill bluish lead-colour, tipped with black; legs, toes, and their membranes dark brown. Total length 18 inches, wing 10·5, tail 4·6, culmen 1·55, tarsus 1·55.

Female. Head and neck pale reddish brown, speckled with blackish; upper parts brown, each feather with pale whitish edges, the edges of the scapulars reddish brown; breast and sides reddish brown; under surface white; under tail-coverts white, with irregular brown bars or spots; primaries dark brown, secondaries dull black, slightly tipped with white; wing-coverts like the back, but the larger ones tipped with white; tail dull greyish brown: irides brown; bill bluish black.

Young male. Resembles more or less the female.

Nestling "may be distinguished by the warm rufous tint of the cheeks and throat and the absence of any loral streak; the upper parts are, moreover, of an almost uniform brown, with hardly any signs of bars on the pinions" (*Yarrell*).

Hab. Palæarctic Region, breeding in the colder regions from Iceland to Kamtschatka, wintering in the more southern latitudes, in Africa as far as Madeira and Abyssinia, in Persia, in Northern India, Burma, China, Japan, Borneo, and even as a straggler in the Marshall Islands; also occasionally in Eastern North America, frequently in Alaska; it straggles even to California.

a. ♂ imm. sk.	No locality.	Zool. Soc.
b, *c*. ♂ ad. et imm. sk.	Great Britain.	Purchased.
d. ♂ ad. sk.	Orkneys.	H. J. Elwes, Esq. [P.].
e, *f*. ♂ ♀ ad. sk.	Sutherland, June.	Col. Irby & Capt. Reid [P.].
g. Imm. sk.	St. Andrew's, Fifeshire (*R. G. W. R.*).	Tweeddale Coll.
h. ♀ juv. sk.	R. Carron, Stirlingshire, Jan. (*J. A. Harvie-Brown*).	Tweeddale Coll.
i. ♂ ad. st.	Llandilo, Wales.	H. Peel, Esq. [P.].

k, *l*. ♂ ♀ ad. sk.	Cambridge Market.	Salvin-Godman Coll.
m. ♀ imm. sk.	Wells, Norfolk, Jan.	E. Dodson, Esq. [P.].
n. ♀ ad. st.	Berkshire.	W. Briggs, Esq. [C.].
o. ♂ imm. sk.	I. of Grain.	Tweeddale Coll.
p. Juv. sk.	Bedgebury Park, Kent, Nov.	Gould Coll.
q. ♀ imm. sk.	Addington, Surrey, Feb.	Colonel Irby.
r. ♂ ad. sk.	Christchurch, Hants, Sept.	Baron A. von Hügel [P.].
s, *t*, *u*. ♂ ♀ ad. sk. et ♂ imm. sk.	Devonshire.	Montagu Coll.
v, *w*. ♂ ad. sk.	Arcachon, France, Nov. (*E. O. S.*).	Seebohm Coll.
x, *y*, *z*. ♂ ad. et imm. sk.	Egypt, Feb. (*G. E. S.*).	Shelley Coll.
a'. ♂ imm. sk.	Mesopotamia (*Jones*).	India Museum [P.].
b'. ♂ ad. sk.	Babylon (*Jones*).	India Museum [P.].
c', *d'*, *e'*. ♂ ♀ ad. et ♂ juv. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
f'. Juv. sk.	Aden.	C. Chevalier, Esq. [P.].
g', *h'*. ♂ ad. sk.	Fao, Persian Gulf, Oct.	W. D. Cumming, Esq. [P.].
i'. ♂ juv. sk.	Narimskaja, Ob, Sept.	Dr. O. Finsch [C].
k', *l'*. ♂ ad. sk.	Lob-nor, Feb. (*Prjevalsky*).	Seebohm Coll.
m', *n'*. ♂ ♀ ad. sk.	Valley of the Yen-e-sai, E. Siberia, lat. 66½°, June (*H. S.*).	Seebohm Coll.
o'. ♀ ad. sk.	Lake Balkash, Aug.	
p', *q'*. ♂ ♀ imm. sk.	Bala Morghab, Jan. (*Aitchison*).	Afghan Delimitation Commission [P.].
r', *s'*. ♂ ad. et ♀ imm. sk.	Kandahar, Jan., Feb.	Lt.-Colonel Swinhoe [P.].
t'. ♀ juv. sk.	Olipur, Afghanistan.	India Museum [P.].
u'. ♂ ad. sk.	Ladak (*Strachey*).	India Museum [P.].
v'. ♂ ad. sk.	Mynpoori, Feb.	Hume Coll.
w', *x'* ♂ ♀ imm. sk.	Futtehgurh, Mar., Nov. (*A. Anderson*).	Hume Coll.
y'. ♀ ad. sk.	Sambhur.	Hume Coll.
z'–*a''*. ♀ ad. et ♂ juv. sk.	E. Narra, Sind, Nov. (*S. Doig*).	Hume Coll.
b''–*e''*. ♂ ♀ ad. sk.	Muncha Lake, Jan.	Hume Coll.
f'', *g''*. ♂ ad. sk.	Delhi, Jan.	Hume Coll.
h'', *i''*. ♂ ad. sk.	Sultanpur, Gurgaon, Dec., March (*W. N. Chill*).	Hume Coll.
k'', *l''*. ♂ ♀ imm. sk.	Etawah, Nov.	Hume Coll.
m''. ♂ imm. sk.	Sandee, Feb. (*A. Anderson*).	Hume Coll.
n''–*q''*. ♂ ad. et ♂ imm. sk.	Allahabad, Jan., Feb. (*A. O. H.*).	Hume Coll.
r''–*w''*. ♂ ♀ ad. et imm. sk.	Phoolpore, Allahabad, Feb. (*A. O. H.*).	Hume Coll.
x'', *y''*, *z''*. ♂ ad. et ♂ imm. sk.	Oudh, March, April.	Hume Coll.
a^3, b^3. ♂ ad. et juv. sk.	Lucknow Dist., Jan., Nov. (*G. Reid*).	Hume Coll.
c^3. ♂ imm. sk.	Nepal.	B. H. Hodgson, Esq. [P.].

d^3. ♀ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.]. (Type of *Anas vitticeps*, Hodgs.)
e^3, f^3. ♂ ad. et ♀ imm. sk.	Native Sikhim, April, Oct. (*L. Mandelli*).	Hume Coll.
g^3. ♀ juv. sk.	Manipur, March (*A. O. H.*).	Hume Coll.
h^3. ♂ ad. sk.	Calcutta, March.	Hume Coll.
i^3, k^3. ♂ ♀ ad. sk.	China.	J. R. Reeves, Esq. [P.].
l^3. ♂ imm. sk.	Shanghai, China, March.	F. Webb, Esq. [P.].
m^3, n^3. ♂ ♀ ad. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.
♂ ad. sk.	Shanghai, Nov.	F. W. Styan, Esq. [P.].
p^3. ♂ imm. sk.	Ningpo, China, Nov. (*R. S.*).	Seebohm Coll.
q^3. ♂ juv. sk.	Kiukiang, China, Jan.	F. W. Styan, Esq. [P.].
r^3. ♂ juv. sk.	Takow, Formosa, Dec. (*R. S.*).	Seebohm Coll.
s^3. ♂ ad. sk.	Japan.	Tweeddale Coll.
t^3, u^3. ♂ ad. et ♀ imm. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
v^3, w^3. ♂ ♀ juv. sk.	Nagasaki, Japan, March.	F. Ringer, Esq. [P.].
x^3. ♀ imm. sk.	Hakodadi, Japan, Nov.	Seebohm Coll.
y^3. ♀ imm. sk.	Chichi-shima, Bonin Is., Oct. (*P. A. Holst*).	Seebohm Coll.
z^3. ♀ juv. sk.	Bintulu, Borneo.	Purchased.
a^4. ♀ juv. sk.	Newfoundland.	H. Reeks, Esq. [P.].
b^4. Skeleton.		
c^4. ♀ skeleton.		Zool. Soc.
d^4, e^4. Imperfect skeletons.	Nepal.	B. H. Hodgson, Esq. [P.].
f^4–i^4. Sterna.		
k^4, l^4. Skulls.		

HYBRID.

Marecа penelope × *Anas boscas*?

m^4. Ad. st.	Great Britain.	Hon. Grantley Berkeley [P.].

2. Mareca americana.

Canard Jensen de la Louisiane, *D'Aubent. Pl. Enl.* 955; *Buff. Hist. Nat. Ois.* ix. p. 174 (1783).

American Wigeon, *Penn. Arct. Zool.* ii. p. 567, n. 502 (1785); *Lath. Syn.* iii. 2, p. 520, n. 65 (1785).

Anas americana, *Gm. S. N.* i. 2, p. 526, n. 97 (1788); *Lath. Ind. Orn.* ii. p. 861, n. 74 (1790); *Wils. Am. Orn.* viii. p. 86, pl. 69. f. 1 (1814); *Vieill. N. D.* v. p. 121 (1816); *Dum. Dict. Sc. Nat.* vi. p. 385 (1817); *Bp. Obs. Nomencl. Wils.* n. 529 (1825); *id. Syn.* p. 384 (1828); *Less. Tr. d'Orn.* p. 634 (Jamaica, Porto Rico) (1831); *Nutt. Man.* ii. p. 389 (1834); *Aud. Orn. Biogr.* iv. p. 337, pl. 345 (1838); *id. Syn.* p. 279 (1839); *D'Orb. in La Sagra, Hist. Nat. Cuba, Ois.* p. 293 (1840); *Aud. B. Am.* vi. p. 259, pl. 389 (1843); *Yarr. Hist. Br. B.* iii. p. 196 (1843); *Giraud, B. Long Isl.* p. 306 (1844); *Schleg. Rev. Crit.* p. cxiv (1844); *DeKay, N. Y. Zool.* ii. p. 345 (1844); *Schleg. Mus. P.-B.*, Anseres, p. 45 (1866); *Sunder. Öfv. K. Vet.-Ak. Förh.* 1869, p. 603 (Porto Rico); *Gieb. Thes.*

Orn. i. p. 344 (1872) : *Finsch, Abh. Brem. Ver.* iii. p. 66 (Alaska) (1872) ; *Adams, P. Z. S.* 1878, p. 431 (Michalaski) ; *Turner, Auk*, 1885, p. 158 (Nearer Islands) ; *Seebh. Hist. Br. B.* iii. p. 543, pl. 63 (egg) (1885) ; *A. O. U. Check-list N. Am. B.* p. 116, n. 187 (1886) ; *Turner, Contr. Nat. Hist. Alaska*, p. 131 (1886) ; *Nels. Nat. Hist. Coll. Alaska*, p. 68 (1887) ; *Ridgw. Man. N. Am. B.* p. 96 (1887) ; *Hartert, Kat. Vogelsamml.* p. 230 (1891) ; *Hatch, B. of Minnes.* p. 43 (1892) ; *Chapm. Bull. Am. Mus. N. H.* 1894, p. 83 (Trinidad).

Anas wigeon, *Bonn. Enc. Méth.* i. p. 129, pl. 33. f. 4 (1790).

Mareca americana, *Steph. Gen. Zool.* xii. 2, p. 135 (1824) ; *Sw. & Rich. Fauna Bor.-Am.* ii. p. 445 (1831) ; *Bp. Comp. List*, p. 56 (1838) ; *Eyt. Mon. Anat.* p. 116 (1838) ; *Blyth, Naturalist*, iii. p. 417 (England) (1838) ; *Hartl. Verz. Ges. Mus.* p. 118 (1844) ; *G. R. Gr. List B. Brit. Mus.* iii. p. 134 (1844) ; *id. Gen. B.* iii. p. 614, n. 2 (1845) ; *Thomps. Ann. & Mag. N. H.* 1845, p. 310 (Ireland) ; *Rchnb. Syn. Av.*, Natatores, t. 92. ff. 159–161 (1845) ; *Denny, P. Z. S.* 1847, p. 40 ; *Gosse, B. Jam.* p. 408 (1847) ; *Macgill. Hist. Br. B.* v. p. 90 (England) (1852) ; *Baird, Stansbury's Rep.* p. 322 (1852) ; *Woodh. Sitgr. Rep.* p. 102 (1853) ; *Bp. Compt. Rend.* xxxviii. p. 664 (1854), xliii. p. 650, n. 118 (1856) ; *Cab. & Gundl. J. f. O.* 1857, p. 227 (Cuba) ; *Newb. P. R. R. Rep.* vi p. 102 (1857) ; *Cass. U.S. Expl. Exp., Mamm. & Orn.* p. 342 (1858) ; *Baird, B. N. Am.* p. 783 (1858) ; *id. Cat. N. Am. B.* n. 585 (1859) ; *id. Mex. Bound. Surv.* ii. *Birds*, p. 27 (1859) ; *Hcerm. P. R. R. Rep.* x. pt. vi. p. 68 (1859) ; *Sclat. & Salv. Ibis*, 1859, p. 231 (Guatemala) ; *Murr. Edinb. N. Philos. Journ.* 1859, p. 229 (Hudson Bay) ; *Coop. & Suckl. N. H. Wash. Terr.* p. 256 (1860) ; *Newt. Ibis*, 1860, p. 308 (St. Thomas) ; *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860) ; *Gundl. J. f. O.* 1861, p. 344 ; *Ross, Canad. Nat.* April 1862 (Mackenzie) ; *Verr. Pr. Ess. Inst.* iii. p. 158 (1862) ; *Hayd. Rep.* 1862, p. 176 ; *Albr. J. f. O.* 1862, p. 207 (Jamaica) ; *Blak. Ibis*, 1863, p. 147 (Brit. N. Am.) ; *G. R. Gr. Cat. Br. B.* p. 192 (1863) ; *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica) ; *A. Newt. P. Z. S.* 1865, p. 256 (egg) ; *Salv. Ibis*, 1865, p. 193 (Pac. coast of Guat.) ; *Gundl. Rep. Fis.-Nat. Cuba*, i. p. 388 (1866) ; *Dress. Ibis*, 1866, p. 43 (Texas) ; *Coues, Pr. Ac. Philad.* 1866, p. 99 (Arizona) ; *Léotaud, Ois. Trinid.* p. 511 (1866) ; *A. Newt. P. Z. S.* 1867, p. 167 (egg) ; *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1867) ; *Degl. & Gerbe, Orn. Eur.* ii. p. 514 (1867) ; *Coues, Pr. Ess. Inst.* v. p. 299 (1868) ; *Brown, Ibis*, 1868, p. 426 (Vancouver I.) ; *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (Yukon) (1869) ; *Baird, t. c.* p. 783 (1869) ; *Eyt. Syn. Anat.* p. 68 (1869) ; *Stev. U.S. Geol. Surv. Terr.* p. 466 (Wyoming) (1870) ; *G. R. Gr. Hand-list*, iii. p. 81, n. 10629 (1871) ; *Allen, Bull. M. C. Z.* iii. p. 183 (Utah) (1872) ; *Coues, Key N. Am. B.* p. 286 (1872) ; *Harting, Handb. Br. Birds*, p. 159 (Great Britain) (1872) ; *Coues, Check-list*, n. 493 (1873) ; *Snow, B. Kans.* p. 11 (1873) ; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873) ; *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mexico) (1874) ; *Coues, Birds N.-West*, p. 564 (1874) ; *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 378 (Cuba) ; *Sclat. & Salv. P. Z. S.* 1876, p. 394 ; *Gundl. Anal. Soc. Esp. Hist. Nat.* vii. p. 402 (Porto Rico) (1878) ; *id. J. f. O.* 1878, p. 190 ; *Sclat. P. Z. S.* 1880, p. 514 ; *A. & E. Newt. Handb. Jam.* p. 113 (1881) ; *Bean, Pr. U.S. Nat. Mus.* 1882, p. 166 ; *Salv. Cat. B. Strickl. Coll.* p. 533 (1882) ; *Ridgw. Nom. N. Am. B.* n. 607 (1882) ; *Coues, Check-list*, 2nd ed. p. 113, n. 713 (1882) ; *B. O. U. List Br. B.* p. 124 (1883) : *Nelson, Cruise 'Corwin,'* p. 96 (1883) ;

B., B., & R. Water-Birds N. Am. i. p. 520 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 694 (1884); *Yarrell, Hist. Br. B.* (*Saund. ed.*) iv. p. 403 (1884–85); *Nehrl. J. f. O.* 1885, p. 146 (Illinois); *Matsch. & Ziemer, ibid.* p. 191; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 158 (Bering Isl.) (1885); *Cory, List Birds W. Ind.* p. 31 (1885); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 158 (Bering I.) (1885); *id. Pr. U. S. Nat. Mus.* x. p. 136 (Bering I.) (1887); *Cory, Auk*, 1888, p. 63 (W. Indies); *id. B. W. Ind.* p. 264 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Saunders, Man. Brit. B.* p. 427 (1889); *Sharpe, Cat. Osteol. Specim. R. Coll. Surg.* iii. p. 303 (1891).

Anas (Boschas) americana, *Nutt. Man.* ii. p. 389 (1834).

Marica americana, *Sw. Class. B.* ii. p. 366 (1837).

Chaulelasmus americanus, *Licht. Nomencl. Av.* p. 102 (Mexico) (1854).

Mareca penelope, *β.* americana, *Blas. List B. Eur.* p. 21 (1862).

Anas (Mareca) americana, *Rchnw. Orn. Centralbl.* 1882, p. 20.

Adult male. Forehead and top of the head whitish, almost immaculate; sides of the head and neck dull whitish, speckled with black; behind the eyes a dark patch, thickly speckled with metallic green; mantle, scapulars, back, and median upper tail-coverts grey, more or less tinted with reddish, finely undulated with black; rump almost black; outer and longer upper tail-feathers black; upper breast and sides reddish vinaceous, the latter undulated with black: lower breast and abdomen white; under tail-coverts velvety black: upper wing-coverts white, but those near the bend of the wing dark grey; primaries and primary-coverts dusky, the former with the inner web paler; secondaries black, some of the inner ones glossed with green, forming a black and green speculum; the longest upper wing-coverts are broadly tipped with black; outer tertial whitish grey on the outer web, the inner ones very long, acuminate, dusky grey on the inner web, velvety black, edged with white on the outer web; under wing-coverts grey; axillaries white; tail dusky black: "bill light greyish blue, the end black; iris brown; legs and feet light bluish" (*Ridgway*). Total length 18–21 inches, wing 10·25–10·75, tail 4·5, culmen 1·30–1·50, tarsus 1·50.

Adult female. Very similar to the female of *M. penelope*, but the head and neck much whiter, the light part of the feathers being whitish instead of reddish brown.

Young male. Similar to the adult female, but the colours more pronounced and the pattern better defined, especially on the wings (*Ridgway*).

Young in down. "Above dark olive with a sepia tinge; a spot of pale greenish fulvous on the posterior half of the wing, one on each side of the back, and one on each side of the rump; lower parts, including head and neck, pale fulvous; a distinct blackish-olive stripe from the bill to and back from the eye, with a wide and conspicuous superciliary stripe of fulvous above it" (*Ridgway*).

Hab. North America, from the Arctic Ocean to Guatemala, and occasionally the West Indies.

a. ♂ ad. st.	No locality.	E. Wilson, Esq. [P.].
b. ♀ ad. st.	N. America.	Audubon Coll.
c. ♂ ad. sk.	N. America.	H. J. Elwes, Esq. [P.].

d. ♂ juv. sk.	N.W. America.	Purchased.
e. ♂ ad. st.	Missouri Brakes, Montana, April.	E. S. Cameron, Esq. [P.].
f, g, h. ♂ ad. et ♂ juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
i. ♀ ad. sk.	British Columbia (*J. K. Lord*).	N. America Boundary Comm. [P.].
k, l. ♂ ad. et juv. sk.	Vancouver Is.	J. K. Lord, Esq. [P.].
m, n, o. ♂ ad. et ♂ juv. sk.	W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
p, q. ♂ ad. et ♀ juv. sk.	Arctic Land Exp.	Sir G. Back [P.].
r. ♂ ad. sk.	Canada.	Government of Canada [P.].
s. ♂ ad. sk.	Virginia, March (*R. Dean*).	Salvin-Godman Coll.
t. ♀ imm. sk.	Norfolk, Virginia, Feb. (*W. Brewster*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Chicago, Illinois (*Nelson & Jencks*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Florida.	W. B. Dismore, Esq. [P.].
w–a'. ♂ ad. et ♂ juv. sk.	Corpus Christi, Texas, Nov., Dec., Jan. (*F. B. Armstrong*).	Salvin-Godman Coll.
b', c'. ♂ ♀ ad. sk.	Ventura, California, Nov.	Salvin-Godman Coll.
d'. ♂ ad. sk.	Hermosillo, State of Sonora, Mexico, Dec. (*F. Ferrari-Perez*).	Salvin-Godman Coll.
e', f', g'. ♂ ad. et ♂ ♀ juv. sk.	Presidio, Mexico, Feb., March (*A. Forrer*).	Salvin-Godman Coll.
h', i', k'. ♂ ad. et ♂ juv. sk.	Dueñas, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
l'. ♀ ad. sk.	Dueñas, Guatemala (*O. S.*).	Tweeddale Coll.
m'. ♂ juv. sk.	Dueñas, Guatemala (*O. S.*).	H. J. Elwes, Esq. [P.].
n'. ♂ juv. sk.	Chiapan, Guatemala (*O. S.*).	H. J. Elwes, Esq. [P.].

o'. Skeleton.

3. Mareca sibilatrix.

Pato pico pequeno, *Azara, Apunt.* iii. p. 432, n. 432 (1805) (Buenos Ayres).

Canard à petit bec, *Sonnini, Voyage d'Azara,* iv. p. 338 (1809).

Anas viduata, part., *Vieill. N. D.* v. p. 164 (1816).

Anas sibilatrix, *Poeppig, Fror. Not.* xxxi. no. 529, p. 10 (Chili) (1829); *id. Bull. Sc. Nat.* xix. p. 103 (1829); *Less. Compl. de Buff., Ois.* ix. p. 536 (1837); *id. op. cit.* 2nd ed. p. 722 (1838).

Anas chiloensis, *King, P. Z. S.* 1830–31, p. 15 (Chiloe); *Less. Compl. de Buff., Ois.* ix. p. 535 (1837); *id. op. cit.* 2nd ed. p. 721 (1838); *Burm. La Plata Reise,* ii. p. 517 (Mendoza) (1861); *Schleg. Mus. P.-B.,* Anseres, p. 46 (1866); *Gieb. Thes. Orn.* i. p. 347 (1872); *Hartert, Kat. Vogelsamml.* p. 230 (1891).

Mareca chiloensis, *Eyt. Mon. Anat.* p. 117, pl. 21 (1838) (Chiloe, and Cayenne!); *Fraser, P. Z. S.* 1843, p. 119 (Chili); *G. R. Gr. List B. Brit. Mus.* iii. p. 134 (Falkland Isl.) (1844); *id. Gen. B.* iii. p. 614, n. 3 (1845); *Rchnb. Syn. Av.,* Natatores, t. 92. ff. 162–63

(1845); *Hartl. Ind. Az. Apunt.* p. 27, n. 432 (1847); *Des Murs in Gay, Hist. de Chile*, i. p. 447 (1848); *Hartl. Naumannia*, 1853, p. 222; *Bibra, Denkschr. Ak. Wien*, v. p. 131 (1853) (Chili): *id. J. f. O.* 1855, p. 57; *Bp. Compt. Rend.* xliii. p. 650, n. 120 (1856); *Cass. U.S. Astr. Exp.* ii. p. 201 (1856); *Gould, P. Z. S.* 1859, p. 96 (Falklands); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 160 (Falklands); *Pelz. Reise Novara, Vög.* p. 138 (1865); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Phil. & Landb. Cat. Av. Chil.* p. 41 (1868); *Sclat. & Salv. P. Z. S.* 1869, p. 635 (Rep. Arg.); *iid. Ibis*, 1869, p. 284 (Gregory Bay); *Eyt. Syn. Anat.* p. 69 (1869); *Sclat. P. Z. S.* 1870, p. 667 (Zool. Gard.), 1871, p. 700 (Zool. Gard.); *G. R. Gr. Hand-list*, iii. p. 81, n. 10630 (1871); *Burm. P. Z. S.* 1872, p. 368 (Argentina); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Huds. P. Z. S.* 1876, p. 108; *Durnf. Ibis*, 1876, p. 163 (Buenos Ayres); *Milne-Edw. Rech. Faun. Rég. Austr.* ch. ix. p. 45 (1882); *White, P. Z. S.* 1883, p. 42 (La Plata); *Sclat. List Vert. An.* 8th ed. p. 437 (1883); *Bodinus, J. f. O.* 1885, p. 21 (Zool. Gart.); *Withingt. Ibis*, 1888, p. 471 (Lomas de Zamora); *Burm. An. Mus. Nac. Buen. Air.* iii. pp. 247, 320 (1888).

Anas parvirostris, *Merr. in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 43 (1841).

Sarkidiornis sibilatrix, *G. R. Gr. Gen. B.* iii. p. 605, n. 3 (1845).

Chaulelasmus chiloensis, *Licht. Nomencl. Av.* p. 101 (1854).

Anas (Mareca) chiloensis, *Burm. J. f. O.* 1860, p. 267 (Mendoza).

Mareca sibilatrix, *Sclat. & Salv. P. Z. S.* 1876, p. 395; *Durnf. Ibis*, 1877, p. 41 (Chuput), p. 192 (Buenos Ayres), 1878, p. 401 (Central Patagonia); *Sclat. & Salv. P. Z. S.* 1878, p. 436 (Elizabeth I.); *Sclat. P. Z. S.* 1880, p. 514; *Sclat. & Salv. Voy. Chall., Birds*, p. 107 (1881); *Sharpe, P. Z. S.* 1881, p. 13 (Coquimbo); *Barrows, Auk*, 1884, p. 274 (Bahia Blanca); *B., B., & R. Water-Birds N. Am.* i. p. 517 (1884); *Berl. J. f. O.* 1887, p. 133 (Paraguay?); *Sclat. Argent. Orn.* ii. p. 135 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 210 (1891); *Holland, Ibis*, 1892, p. 208 (Argentina); *Berkeley James, New List Chil. B.* p. 9, n. 159 (1892).

Anas (Mareca) sibilatrix, *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 53 (1882).

Hybrids.

Mareca chiloensis × Dafila spinicauda, *Sclat. P. Z. S.* 1878, p. 1002; *id. List Vert. An.* 8th ed. p. 437, spec. *t* [2] (1883).

Anas chiloensis × A. spinicauda, *Leverk. J. f. O.* 1890, p. 229.

Adult male. Forehead and fore cheeks white, remainder of the head and neck black; behind the eyes a glossy green band meeting on the nape; lower neck with black and white bars; back and scapulars black, broadly edged with white; lower back and rump black; upper tail-coverts, breast, and abdomen white; sides, flanks, and under tail-coverts rusty red; wing-coverts white, except those near the bend of the wing, which are dusky grey; primaries dusky black; tips of the greater wing-coverts and secondaries velvety black, forming a speculum; tertials long and acuminate, black, more or less broadly edged with white, especially on the outer web; under wing-coverts greyish, finely powdered with brown; tail dusky black: "bill and feet black; irides chestnut-brown" (*Mus. Taur.*).

Total length 20 inches, wing 10·6, tail 4·2, culmen 1·45, tarsus 1·55.

Female. Similar, but not so bright in colour.

Young in down. Upper parts brown, with two white spots at the base of the wings and two on the sides of the rump; lower parts white; sides of the head bright rufous.

Hab. Southern part of S. America, Chili, Paraguay, Argentine, Patagonia, Falkland Islands.

a. Ad. sk.	Chili.	Eyton Coll.
b. ♂ ad. sk.	Chili (*E. C. Reed*).	Purchased.
c. ♂ ad. sk.	Prov. of Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Santiago.	H. J. Elwes, Esq. [P.].
e. ♂ ad. sk.	Rio Palmaiquen, March.	H. Berkeley James, Esq. [P.].
f. ♂ ad. sk.	Lake Llanque, Nov.	H. Berkeley James, Esq. [P.].
g, h. Ad. et imm. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
i. Ad. st.	I. of Chiloe.	The Admiralty [P.].
k. ♂ ad. sk.	Straits of Magellan.	Voyage of H.M.S. 'Challenger' [P.].
l. ♀ juv. sk.	Coquimbo, June.	Dr. Coppinger [C.].
m. Ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.
n. Juv. sk.	Falkland Is.	Tweeddale Coll.
o. ♀ imm. sk.	Falkland Is., Nov.	Antarctic Exp. [P.].
p. ♀ imm. sk.	Buenos Ayres, June (*F. Withington*).	Sclater Coll.
q. Ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
r. Pull. sk.	Bred in confinement.	H. J. Elwes, Esq. [P.].
s. Pull. st.	Bred in confinement.	A. D. Bartlett, Esq. [P.].

31. NETTION.

	Type.
Nettion, *Kaup, Natürl. Syst.* p. 95 (1829)	N. crecca.
Querquedula, *Eyton* (*nec Steph.*), *Mon. Anat.* p. 37 (1838)	N. crecca.
Virago, *Newt. P. Z. S.* 1871, p. 651	N. castaneum.

Range. Cosmopolitan.

Key to the Species.

a. Upper wing-coverts dark grey or slate-grey.
  a'. Head entirely or partly metallic green.
    a''. Head partly metallic green.
      a'''. Top of the head black, cheeks whitish buff, with a black band descending from the eyes to the hind part of the throat: female with a whitish round spot on the anterior part of the cheeks, near the base of the bill ..... *formosum*, p. 240.

b'''. Top of the head chestnut, like the cheeks; a broad metallic-green band from the eyes to the occiput.
*b*⁴. No white crescentic band on each side of the breast, in front of the shoulder; the lower scapulars yellowish white, broadly edged on the outer web with velvety black.. *crecca* ♂, p. 243.
*c*⁴. A broad crescentic white band on each side of the breast, in front of the shoulder; scapulars with no white ..... *carolinense* ♂, p. 250.
b''. Head and upper part of the neck dark metallic green ..... *castaneum* ♂, p. 252.
b'. Head with no metallic-green colour.
c''. A white band anteriorly to the speculum, formed by the tips of the last row of upper wing-coverts; this white band broader anteriorly and gradually diminishing in breadth posteriorly.
c'''. Anterior secondaries entirely white: female similar to the male ..... *capense*, p. 259.
d'''. Anterior secondaries not entirely white.
*d*⁴. Speculum velvety black, with a longitudinal metallic green band on the 7th, 8th, and 9th secondaries, leaving a black portion also above.
*d*⁵. Cheeks dull greyish, finely streaked with black; no ring of white feathers round the eyes; usually no white edge on the outer web of the first secondary ..... *castaneum* ♀, p. 252. / *gibberifrons*, p. 254.
*e*⁵. Cheeks brown, with indistinct darker streaks; a ring of white feathers round the eyes; the first secondary broadly white on the outer web ..... *albigulare*, p. 257.
*e*⁴. Speculum entirely velvety black, with a green lustre in some lights, but with no metallic-green band ..... *bernieri*, p. 258.
d''. A narrow cinnamon band at the tip of the last row of the upper wing-coverts; head and upper part of neck greyish brown, thickly barred with narrow black bands: sexes similar.
e'''. Speculum velvety black, with a metallic-green longitudinal band on the upper part.
*f*⁴. Bill yellow, with the culmen black.
*f*⁵. Smaller, wing 8 to 8·25 inches; abdomen like the breast whitish, each feather with a subterminal black spot; scapulars with large black spots and narrow rufescent edges ..... *flavirostre*, p. 261.

g^3. Larger, wing 8·70 inches; abdomen unspotted, and like the under tail-coverts pale greyish white; scapulars with small black spots and broad rufescent edges.. *crypterum*, p. 262.
g^4. Bill wholly dark, without any yellow. *andium*, p. 263.
f''. Speculum black, with no metallic-green band ..... *georgicum*, p. 264.
b. Upper wing-coverts not dark grey.
c'. Upper wing-coverts brassy green: size small, wing 6·20 inches ..... *punctatum*, p. 265.
d'. Upper wing-coverts velvety black.
e''. Axillaries white; a white patch or broad band at the tip of the secondaries .... *brasiliense*, p. 266.
f''. Axillaries black; a white patch above the tip of the anterior greater wing-coverts .. .. *torquatum*, p. 268.

1. Nettion formosum.

Anas formosa, *Georgi, Reise Russ. Reich.* p. 168 (1775); *Gm. S. N.* i. 2, p. 523, n. 92 (1788); *Lath. Ind. Orn.* ii. p. 876, n. 108 (1790); *Vieill. N. D.* v. p. 168 (1816); *Dum. Dict. Sc. Nat.* vi. p. 393 (1817); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Schleg. Rev. Crit.* p. 109 (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 127, tab. 82 B (♂), 82 C (♀) (1850); *Schleg. Mus. P.-B.*, Anseres, p. 54 (1866) (syn. emend.); *Gieb. Thes. Orn.* i. p. 351 (1872) (syn. emend.); *Seebh. Ibis*, 1888, p. 351 (Great Liakoff I.); *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Seebh. B. Jap. Emp.* p. 244 (1890); *id. Ibis*, 1892, p. 96 (Tsusima); *Campb. ibid.* p. 245 (Corea).

Anas glocitans, *Pall. Act. Stockh.* xl. pp. 26, 33, t. 1 (1779); *Gm. S. N.* i. 2, p. 526, n. 96 (1788) (syn. emend); *Lath. Ind. Orn.* ii. p. 862, n. 75 (1790) (syn. emend.); *Bonn. Enc. Méth.* i. p. 128, pl. 36. f. 4 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 261 (1811); *Dum. Dict. Sc. Nat.* vi. p. 375 (1817); *Less. Compl. Buff., Ois.* ix. p. 536 (1837); *id. op. cit.* 2nd ed. p. 722 (part.) (1838); *Midd. Sibir. Reis.* ii. p. 230, tab. xxiii. ff. 1, 2 (eggs) (1853); *Swinh. P. Z. S.* 1863, p. 324; *id. Ibis*, 1867, pp. 231, 394 (Amoy); *Przew. Voy.* n. 200 (1867–69); *Tacz. J. f. O.* 1870, p. 312 (Dauria); *Homey. ibid.* p. 431; *A. David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 451 (1871).

Baikal Teal, *Lath. Syn.* iii. 2, p. 557, n. 97 (1785).

Anas baikal, *Bonn. Enc. Méth.* i. p. 158 (1791).

Querquedula torquata, *Messerschm. Orn. MS.* viii. n. 196 (*fide Pall. Zoogr. Rosso-As.* ii. p. 261) (1811).

Anas picta, *Steller, Obs. MS.* (*fide Pallas, l. c.*).

Querquedula formosa, *Steph. Gen. Zool.* xii. 2, p. 151 (1824); *Eyt. Mon. Anat.* p. 124, pl. ii. f. 2 (trachea) (1838); *Strickl. P. Z. S.* 1842, p. 168; *Bp. Cat. Met. Ucc. Eur.* p. 71, n. 436 (Eur. Or.) (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 137 (1844); *Bp. Rev. Crit. Orn. Eur.* p. 103 (1850); *Gerbe, Rev. et Mag. de Zool.* 1854, p. 12 (France); *Sclat. P. Z. S.* 1867, p. 818 (Zool. Gard.); *Degl. & Gerbe, Orn. Eur.* ii. p. 523 (France)(1867); *Eyt. Syn. Anat.* p. 77 (1869); *Sharpe & Dress. B. of Eur.* vi. p. 521 (syn. emend.), pl. 428 (pt. 1, 1871); *Hume, Str. Feath.* vii. p. 494 (India) (1879), viii. p. 115, n. 966, p. 494 (Sultanpore) (1879); *Sclat. P. Z. S.*

1880, p. 521; *Hume & Marsh. Game B. of Ind.* iii. p. 225 (1880); *Bolau, J. f. O.* 1881, p. 64; *Blak. & Pryer, Tr. As. Soc. Jap.* x. 1, p. 98 (1882); *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); *Fiori, Zool. Anzeig.* 1882, p. 94; *id. Atti Soc. Natur. di Mod.* (3) i. p. 4 (1882); *Gigl. Icon. Avif. Ital.* sp. & tav. 354 bis (fasc. xxi. 1883); *Sclat. List Vert. An.* 8th ed. p. 433 (1883); *Salvad. El. Ucc. Ital.* p. 260 (1886); *Dorries, J. f. O.* 1888, p. 94 (E. Siberia); *Tristr. Cat. Coll. B.* p. 49 (1889).

Querquedula glocitans, *Boie, Isis*, 1828, p. 329; *G. R. Gr. Gen. B.* iii. p. 616, n. 6 (1845); *Rchnb. Syn. Av.* t. 89. f. 412 (♂) (1845), t. 90. ff. 2338–40 (1850); *Blyth, Cat. B. Mus. A. S. B.* p. 305. n. 1779 (Lower Bengal) (1849); *Licht. Nomencl. Av.* p. 102 (1854); *Swinh. Ibis*, 1861, p. 344, 1863, p. 434 (Formosa); *Jerd. B. of Ind.* iii. p. 808 (1864); *Eyt. Syn. Anat.* p. 74 (part.) (1869); *Dyb. J. f. O.* 1873, p. 109; *Tacz. J. f. O.* 1874, p. 337, 1875, p. 257; *id. Bull. Soc. Zool. Fr.* ii. p. 45 (1877); *Hume, Str. Feath.* viii. pp. 412, 494 (1879); *Hume & Marsh. Game B. of Ind.* iii. pl. 29 (1880); *Dyb. & Tacz. Bull. Soc. Zool. Fr.* ix. p. 147 (Kamtschatka) (1884).

Anas perpulchra, *Yarr. Report of Counc. Z. S.* 1831, p. 22.

Anas (Boschas) formosa, *Sw. Journ. of the Roy. Inst. of Gr. Brit.* ii. p. 21 (1831).

Anas cucullata, *Fischer, Bull. Soc. Nat. Moscou*, iii. p. 279 (Petropaulski) (1831); *id. Nouv. Mém. Soc. Nat. Moscou*, iii. p. 111, pl. ix. (1834); *Gieb. Thes. Orn.* i. p. 349 (1872); (*cf. Stejn. Pr. U.S. Nat. Mus.* x. p. 136, note, 1887).

Anas (Anas) glocitans, *Brandt, Descr. et Icon. An. Ross. Nov.* fasc. i. p. 28, t. 4 (1836).

Dafila? cucullata, *G. R. Gr. Gen. B.* iii. p. 615, n. 3 (1845) (*ex Fischer*).

Eunetta formosa, *Bp. Compt. Rend.* xliii. p. 650, n. 109 (1856); *Swinh. P. Z. S.* 1871, p. 418 (China); *G. R. Gr. Hand-list*, iii. p. 84, n. 10672 (1871); *Swinh. Ibis*, 1873, p. 368, 1875, p. 137 (Chefoo); *id. Ibis*, 1877, p. 147 (Japan); *David & Oust. Ois. Chine*, p. 503 (1877); *Seebh. Ibis*, 1884, p. 270 (C. China); *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (note) (1887); *Styan, Ibis*, 1891, pp. 328, 497; *De la Touche, Ibis*, 1892, p. 492.

Dafila acuta, *a.* cucullata, *Bp. Compt. Rend.* xliii. p. 650 (1856) (hybrid!).

Anas (Querquedula) formosa, *Gerbe, Rev. et Mag. de Zool.* 1854, pl. 3 (France); *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 54 (1882).

Anas (Querquedula) glocitans, *Schrenck, Vög. d. Amur-land*, p. 474 (1860); *Radde, Reis. in S. O.-Sibir.* ii. p. 368 (1863).

Aix formosa, "*Brandt*," *Swinh. Ibis*, 1867, p. 394.

Aix glocitans, *Swinh. Ibis*, 1867, p. 409.

Querquedula bimaculata, *Fritsch (nec auct.), Vög. Eur.* p. 418, Taf. 47. f. 7 (♂), f. 11 (♀) (1870).

Eunetta glocitans, *Prjev. in Rowl. Orn. Misc.* iii. p. 105 (Mongolia) (1878).

Nettion formosa, *Gigl. Avif. Ital.* p. 312, n. 302 (1886).

Hybrid.

Anas formosa×A. penelope, *Kemp. Mém. Soc. Zool. Fr.* iii. p. 112 (1890); *Leverk. J. f. O.* 1890, p. 230.

Adult male. Crown of the head, back of the neck, entire throat,

and a band extending from the eye across the face to the throat, black; face and neck on the sides and under the throat buff, the buff parts margined narrowly with white; also the black crown from behind the eye is bordered on each side with a white band which runs down the sides of the black nape, and spreads on the sides of the neck; from behind the eye a broad glossy green band of a crescentic shape passes along the sides of the head and inferiorly changes into black, between the buff colour anteriorly and white band posteriorly; back and scapulars grey, somewhat tinged with brown, minutely vermiculated with black; the inner scapulars elongated, lanceolate, on the outer web black, edged with cinnamon, silky buff, edged with brown on the inner web; lower back and rump greyish brown; the upper tail-coverts brown, edged with rufous; lower neck and upper breast vinous, marked with small oval black spots; on the sides of the breast, just before the bend of the wing, a crescentic white band; lower breast and belly white; flanks grey, minutely vermiculated with black; under tail-coverts black, but marked with bay on the sides, the longer ones whitish buff at the tip, with slight vermiculation; on the lower flanks, just at the base of the tail a band of silky white, formed by the tip of the feathers; wings pale greyish brown; the last row of the upper wing-coverts tipped with cinnamon, forming a band which borders anteriorly the wing-speculum: the latter is glossy green anteriorly, with a subapical velvety black band, and bordered by a white band at the tip of the secondaries; the longer tertials marked with velvety black on the outer web; quills pale brown; under wing-coverts brown-grey, the greater ones pale grey, the central ones and the axillaries whitish, minutely spotted with brown-grey: bill dark bluish brown; feet light greyish blue, darker on the web; irides chestnut-brown. Total length 18 inches, wing 8·5, tail 4·2, culmen 1·5, tarsus 1.

Female. Brown, the feathers with paler edges, more or less rufous; at the base of the upper mandible near the gape a round buffy white spot, above which on the lores there is a brown mark; throat and part of the lower cheeks buffy white, immaculate; superciliary stripe and cheeks buffy, streaked and spotted with brown; rump greyish brown; breast and flanks rufous, mottled with dark brown marks more or less of a crescentic shape; abdomen and under tail-coverts buffy white, the latter with brown oval spots; on the lower flanks at the base of tail a greyish patch, minutely vermiculated with brown; wing as in the male, but duller, and the band at the tip of the secondaries buffy white. In size somewhat smaller than the male.

Hab. Eastern Siberia; Southern China and Japan in winter; it straggles into India and very rarely into the Western Palæarctic Region (France, Italy).

a. ♂ imm. sk.	Ghumanhora Jheel, 22 miles W. of Delhi, Nov. (*W. N. Chill*).	Hume Coll.
b, c, d. ♂ ♀ ad. st.	Siberia.	Old Coll.
e. ♂ imm. st.	Siberia.	Zool. Soc.

f, g. ♂ ad. sk. et st.	China.	J. R. Reeves, Esq. [P.].
h, i. ♂ ♀ ad. sk.	China.	Hume Coll.
k. ♂ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
l, m, n. ♂ ♀ ad. sk.	Pa-Chow, Ichang, Dec.	C. Pratt, Esq. [C.].
o. ♀ ad. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.
p. ♂ ad. sk.	Amoy, China, Jan. (*R. S.*).	Seebohm Coll.
q, r. ♂ ♀ ad. sk.	Corea.	C. W. Campbell, Esq. [P.].
s, t, u. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
v–z. ♂ ♀ ad. et ♂ juv. sk.	Nagasaki, Japan, Dec.–Jan.	F. Ringer, Esq. [P.].
a'. ♂ ad. sk.	Awomeri, Japan, April.	Seebohm Coll.
b'. ♂ ad. sk.	Kobe (??), Jan. (*S. Chapman*).	Tweeddale Coll.
c', d'. ♂ ad. sk.	Kechi village, Tsu-shima (*P. A. Holst*).	Seebohm Coll.
e'. ♀ skeleton.		Zool. Soc.

2. Nettion crecca.

The Teal.

Querquedula minor, *Briss. Orn.* vi. p. 436, t. xl. f. 1 (1760).

Anas crecia (*errore?*), *Linn. Faun. Suec.* p. 45, n. 129 (1761).

Anas crecca, *Linn. S. N.* i. p. 204, n. 33 (1766); *Gm. S. N.* i. 2, p. 532, n. 33 (1788); *Lath. Ind. Orn.* ii. p. 872, n. 100 (1790); *Bonn. Enc. Méth.* i. p. 154 (1791); *Lath. Tr. Linn. Soc.* iv. p. 108, pl. xiii. f. 1 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 263 (Kurile I. and Kamtschatka) (1811); *Temm. Man.* p. 547 (1815); *Vieill. N. D.* v. p. 173 (1816); *Dum. Dict. Sc. Nat.* vi. p. 390 (1817); *Temm. Man.* 2nd ed. ii. p. 846 (1820); *Licht. Verz. Doubl.* p. 84 (1823); *Flem. Brit. An.* p. 125 (1828); *Kittl. Isis*, 1829, p. 529 (Kamtschatka); *Frankl. P. Z. S.* 1831, p. 125; *Savi, Orn. Tosc.* iii. p. 148 (1831); *Brehm, Vög. Deutschl.* p. 884 (1831); *Ménétr. Cat. Rais. Cauc.* p. 57 (Caspian) (1832); *Jen. Man.* p. 235 (1835); *Temm. Man.* 2nd ed. iv. p. 539 (1840); *Keys. & Blas. Wirbelth. Eur.* pp. lxxxv. 227 (1840); *Selys-L., Faun. Belg.* i. p. 142 (1842); *Naum. Vög. Deutschl.* xi. p. 701, t. 304 (1842); *Schleg. Rev. Crit.* p. cxiii (1844); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Degl. Orn. Eur.* ii. p. 438 (1849); *Temm. & Schleg. Faun. Jap., Aves*, p. 127 (1850); *Harc. P. Z. S.* 1851, p. 146 (Madeira); *Midd. Sibir. Reis.* ii. p. 230 (1853); *Wallengr. Naumannia*, 1854, p. 273 (Scandinavia); *Bolle, J. f. O.* 1855, p. 179 (Canaries); *Kittl. Denkw.* ii. p. 292 (1858); *Swinh. P. Z. S.* 1863, p. 324 (China); *Jerd. B. of Ind.* iii. p. 806 (1864); *Swinh. Ibis*, 1865, p. 347 (Formosa); *Godm. Ibis*, 1866, p. 102 (Azores); *Schleg. Mus. P.-B.*, Anseres, p. 52 (part.) (1866); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Przew. Putesch. Ussur.* n. 205 (1867–69); *Dyb. & Parr. J. f. O.* 1868, p. 358 (Dauria); *Droste, Vogelw. Borkum*, p. 280 (1869); *Swinh. Ibis*, 1870, p. 366 (Hainan); *Gurn. Ibis*, 1871, p. 299 (Algeria); *Saund. ibid.* p. 396 (S. Spain); *Gieb. Thes. Orn.* i. p. 349 (1872); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Blyth, B. of Burma*, p. 166 (1875); *Blakist. Ibis*, 1876, p. 335 (Kamtschatka); *Legge, B. of Ceyl.* p. 1083 (1880); *Scully, Ibis*, 1881, p. 593 (Gilgit); *Severtz Ibis*, 1883, p. 76 (Pamir Range); *Tristr. Faun. & Flor. of Palest.*

p 116 (1884); *Seebh. Hist. Brit. B.* iii. p. 545, pl. 66 (egg) (1885); *Turner, Contr. N. H. Alaska*, p. 132 (Aktha I.) (1886); *A. O. U. Check-list N. Am. B.* p. 116 (1886); *Scully, J. A. S. B.* lvi. p. 88 (1887); *Seebh. B. Jap. Emp.* p. 244 (1890); *Rchnw. J. f. O.* 1890, p. 82; *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Brandt, J. f. O.* 1891, p. 267 (Sitka).

Anatra querquedula minore, *Ger. Stor. degli Uec.* v. tt. 596, 597 (young), 598 (♂ ad.) (1776).

Petite Sarcelle, *D'Aubent. Pl. Enl.* 947: *Buff. Hist. Nat. Ois.* ix. p. 265, pls. 17, 18 (1783).

Common Teal, *Lath. Syn.* iii. 2, p. 551, n. 88 (1785).

Querquedula crecca, *Steph. Gen. Zool.* xii. 2, p. 146 (1824): *Boie, Isis*, 1828, p. 329; *Sykes, P. Z. S.* 1832, p. 169, n. 222 (India); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna): *Gould, B. Eur.* p. 362 (1837); *Bp. Comp. List*, p. 57 (1838); *Eyt. Mon. Anat.* p. 123, pl. 8. ff. 1, 2 (anatomy), pl. 10 (skeleton and trachea) (1838); *Macgill. Man.* ii. p. 167 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 137 (1844); *id. Gen. B.* iii. p. 616, n. 1 (1845): *Rüpp. Syst. Uebers.* p. 138, n. 494 (Red Sea) (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 186–187 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 146 (Nepal) (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 305, n. 1780 (India) (1849); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Kelaart, Prodr. Cat.* p. 136 (Ceylon) (1854); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (1854); *Licht. Nom. Av.* p. 102 (Arabia) (1854); *Bolle, J. f. O.* 1855, p. 314 (Spain); *Bp. Compt. Rend.* xliii. p. 650, n. 94 (1856); *Brandt, Nordl. Ural etc.* p. 70 (1856); *Adams, P. Z. S.* 1858, p. 510; *Tristr. Ibis*, 1860, p. 81; *Swinh. Ibis*, 1861, p. 345 (China), 1863, p. 434 (Formosa); *Jerd. B. of Ind.* iii. p. 806 (1864); *Gould, B. Gr. Brit.* v. pl. 16 (1865); *More, Ibis*, 1865, p. 443 (England); *Whitely, Ibis*, 1867, p. 207 (Hakodaki); *Degl. & Gerbe, Orn. Eur.* ii. p. 521 (1867); *Swinh. Ibis*, 1867, p. 399 (Amoy); *Eyt. Syn. Anat.* p. 75 (1869); *Elw. & Buckl. Ibis*, 1870, p. 340: *Blanf. Geol. and Zool. Abyss.* p. 438 (1870): *Finsch, Tr. Zool. Soc.* vii. p. 329 (1870); *Sharpe & Dress. B. Eur.* vi. p. 97, pl. 426 (pt. 1, 1871): *Swinh. P. Z. S.* 1871, p. 418; *Holdsw. P. Z. S.* 1872, p. 479; *Shell. B. of Egypt*, p. 286 (1872); *Coues, Key*, p. 287 (1872): *id. Check-list*, n. 474 (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1322 (1873); *Hume & Anders. Lahore to Yark.* p. 297 (1873); *Dyb. J. f. O.* 1873, p. 110; *Coues, Birds N.-West*, p. 566 (1874); *Hume, Str. Feath.* iii. p. 193 (Pegu) (1875); *Blanf. East. Pers.* ii. p. 301 (1876); *Dress. Ibis*, 1876, p. 419; *Scully, Str. Feath.* iv. p. 200 (1876): *Seebh. & H. Brown, Ibis*, 1876, p. 443; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 46 (E. Siberia) (1877); *id. Orn. Faun. Vost. Sibir.* p. 70 (1877); *Swinh. Ibis*, 1877, p. 147; *David & Oust. Ois. Chine*, p. 502 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 213 (Japan); *Anders. Yunn. Exped.* p. 700 (1878); *Prjev. in Rowl. Orn. Misc.* iii. p. 104 (1878); *Hume & Davis. Str. Feath.* vi. p. 489 (1878); *Seebh. Ibis*, 1879, p. 22 (Yesso); *Finsch, Verh. k. z.-b. Ges. Wien*, 1879, p. 263 (W. Siberia); *Hume, Str. Feath.* viii. p. 115, n. 964 (1879); *Scully, ibid.* p. 363 (Nepal) (1879); *Tirant, Bull. Com. Agr. & Industr. Cochinchine*, i. 1, 1878, p. 161 (1879); *Sclat. P. Z. S.* 1880, p. 521; *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 184 (1880); *Hume & Marsh. Game B. of Ind.* iii. p. 205, pl. 27 (1880); *Bidd. Ibis*, 1881, p. 100; *Bolau, J. f. O.* 1881, p. 64; *C. Swinh. Ibis*, 1882, p. 124: *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 97 (1882); *Salv. Cat. B. Strickl. Coll.* p. 535 (1882); *Coues, Check-list*, 2nd ed.

n. 714 (1882); *Oates, Str. Feath.* x. p. 245 (Pegu) (1882); *id. B. of Brit. Burm.* ii. p. 285 (1883); *B. O. U. List Brit. B.* p. 127 (1883); *Sclat. List Vert. An.* 8th ed. p. 433 (1883); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 343 (1883); *Blakist. Chrysanth.* 1883, p. 27; *id. Amend. List B. Jap.* p. 9 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 246 (Shoa) (1884); *Radde, Ornis Caucas.* p. 457 (1884); *Dyb. & Tacz. Bull. Soc. Zool. Fr.* ix. p. 147 (Commander Isl.) (1884); *Madar. Zeitschr. d. ges. Orn.* i. p. 38 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 38 (1884–85); *Verbury, Ibis,* 1886, p. 22 (Aden); *Salvad. El. Ucc. Ital.* p. 261 (1886); *Scully, J. A. S. B.* lvi. p. 88 (1887); *Tait, Ibis,* 1887, p. 376 (Portugal); *Lilf. Col. Fig. Brit. B.* pt. viii. pl. — (1888); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 321 (Shoa) (1888); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 131 (Japan) (1888); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 91 (1889); *Tristr. Cat. Coll. B.* p. 49 (1889); *Meyer, Abbild. Vogel-Skel.* pt. xii. pl. cxiv. (1889); *Saunders, Man. Brit. B.* p. 419 (1889); *Evans, Ibis,* 1891, p. 72 (incubation); *Sharpe, Sec. York. Miss., Aves,* p. 130 (1891); *Arrig. degli Oddi, Atti Soc. Ven.-Trent. Sc. Nat.* xii. pp. 142–144 (var.) (1891); *De la Touche, Ibis,* 1892, p. 491 (China); *Dub. Faun. Vert. Belg., Ois.* ii. p. 452, pl. 258 (1892); *Barnes, Ibis,* 1893, p. 174 (Aden); *Meade-Waldo, Ibis,* 1893, p. 199 (Canaries); *Pears. & Bidw. Ibis,* 1894, p. 232 (N. Norway); *Oust. Ois. Turkest. etc.* (*Nouv. Arch. Mus.* (3) vi. *Extr.* p. 98, 1894).

Nettion crecca, *Kaup, Natürl. Syst.* p. 95 (1829); *Baird, B. N. Am.* p. 778 (1858); *id. Cat. N. Am. B.* n. 580 (1859); *Coues, Pr. Ac. Philad.* 1861, p. 238 (Labrador); *Blakist. Ibis,* 1862, p. 332 (N. Japan); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1867); *Coues, Pr. Ess. Inst.* v. p. 298 (1868); *G. R. Gr. Hand-list,* iii. p. 83, n. 10661 (1871); *Sund. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Ridgw. Nom. N. Am. B.* n. 611 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 7 (1884); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 155 (Bering I., Kamtschatka) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 397 (Loo-choo I.) (1887); *id. Zeitschr. ges. Orn.* iv. p. 169 (Loo-choo I.) (1887); *Ridgw. Man. N. Amer. B.* p. 94 (1887).

Querquedula subcrecca. *Brehm, Isis,* 1830, p. 998; *id. Vög. Deutschl.* p. 885 (1831); *id. Vogelf.* p. 376 (1855).

Querquedula creccoides, *Brehm* (*nec King*), *Isis,* 1830, p. 998; *id. Vög. Deutschl.* p. 886 (1831); *id. Vogelf.* p. 376 (1855).

Sarcelle rouge, *Less. Tr. d'Orn.* p. 634, n. 74 (1831) (type examined); *Pucher. Rev. et Mag. de Zool.* 1850, p. 637 (Bengala=*A. crecca,* juv.); *Hartl. J. f. O.* 1855, p. 420, n. 35.

Anas rubens, *Less.* (*nec Gm.*) (ubi?), *fide Bp. Compt. Rend.* xliii. p. 650.

Boschas crecca, *Sw. Class. B.* ii. p. 367 (1837); *Jerd. Madr. Journ.* xii. p. 220, n. 384 (1840).

?Anas grœnlandica, *Brehm, Vogelf.* p. 376 (1855).

Querquedula crecca, *a.* rubens, *Bp. Compt. Rend.* xliii. p. 650 (Bengala) (1856).

Anas (Querquedula) crecca, *Schrenck, Vög. d. Amur-Land,* p. 474 (1860); *Radde, Reis. S. O.-Sibir.* ii. p. 367 (1863); *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 54 (1882).

Querquedula (Nettion) crecca, *Coues, Key N. Am. B.* 2nd ed. p. 695 (1884).

Dafila (!) crecca, *Stejn. Pr. U.S. Nat. Mus.* x. p. 136 (Commander Isl.) (1887).

Hybrids.

Bimaculated Duck, *Penn. Brit. Zool.* ii. p. 602, pl. C, n. 287 (England) (1776); *Lath. Syn.* iii. 2, p. 521, n. 66 (part.) (1785); *Mont. Orn. Dict.* i. (1802); *Bewick, Brit. B.* ii. p. 378 (1804); *Penn. Brit. Zool.* 2nd ed. ii. p. 274 (1812); *Mont. Orn. Dict.* 2nd ed. p. 34 (1831); *Yarr. Brit. B.* iii. p. 165, with fig. (1843); *Tomes, Zoologist*, 1847, p. 1698; *Sclat. P. Z. S.* 1860, p. 303 (=A. boschas × Querquedula crecca); *Hancock, N. H. Tr. Northumb.* vi. p. 153 (1874) (=Wigeon × Teal); *Saund. Yarrell's Hist. Br. B.* iv. p. 386 (1884–85) (=Teal × Wigeon).

Anas glocitans, *Lath.* (*nec Pall.*) *Gen. Syn. Suppl.* i. p. 297 (1787); *Gm. S. N.* i. 2, p. 526, n. 96 (part.) (1788); *Vieill. N. D.* v. p. 118 (part.) (1816); *Flem.* (*nec Pall.*) *Brit. An.* p. 125 (1828); *Jen. Man. Brit. Vert. An.* p. 232 (1835); *Temm. Man. d'Orn.* 2nd ed. iv. p. 533 (1840); *Yarr. Hist. Brit. B.* 2nd ed. iii. p. 260 (part.) (1845); *Tomes, P. Z. S.* 1846, p. 121; *Macg. Hist. Brit. B.* v. p. 42 (part.) (1852).

Mareca? glocitans, *Steph. Gen. Zool.* xii. 2, p. 140 (1824).

Querquedula glocitans, *Vig.* (*nec Pall.*) *Linn. Trans.* xiv. p. 559 (1825); *Eyt. Cat. Brit. B.* p. 60 (1836); *id. Mon. Anat.* p. 122 (1838); *Bp. Comp. List*, p. 57, n. 414 (1838); *Macgill. Man. N. H., Orn.* ii. p. 168 (1842); *Eyt. Syn. Anat.* p. 74 (part.) (1869).

Bimaculated Teal, *Selby, Brit. Orn.* ii. p. 321, pls. 55 (♂), 55* (♀) (1833); *Gould, B. Eur.* pl. 363 (1837); *Swinh. Ibis*, 1867, p. 394.

Anas bimaculata, "*Gm.*," *Bp. Comp. List*, p. 57 (in syn. sp. 414) (1838); *K. & B. Wirbelth. Eur.* p. lxxxv (1840); *Schleg. Rev. Crit.* p. cxiii (1844); *Tomes, Zoologist*, 1847, p. 1698 (=A. boschas × Querquedula crecca); *Bp. Rev. Crit. Orn. Eur.* p. 103 (1850); *Berkeley, Field*, 1861, March 16 (=A. boschas × Mareca penelope); *Newt. P. Z. S.* 1861, p. 392 (=A. boschas × Querquedula crecca); *Jerd. B. of Ind.* iii. p. 809 (1864).

Querquedula bimaculata, *Bp. Cat. Met. Ucc. Eur.* p. 71, n. 437 (1842); *G. R. Gr. Gen. B.* iii. p. 616, n. 7 (1845); *Bp. Rev. Crit. Orn. Eur.* p. 193 (1850); *G. R. Gr. Cat. Brit. B.* p. 194, specim. *a* (♂), *b* (♀) (1863); *B. O. U. List Brit. B.* p. 127 (1883) (Teal × Wild Duck).

Eunetta bimaculata, *Bp. Compt. Rend.* xliii. p. 650, n. 110 (1856).

Anas formosa, part., *Schleg. Mus. P.-B.*, Anseres, p. 351 (1872).

Anas crecca × A. penelope, *Kemp. Mém. Soc. Zool. Fr.* iii. p. 111 (1890); *Leverk. J. f. O.* 1890, p. 230.

Anas boschas ♂ × A. crecca ♀, *Leverk. J. f. O.* 1890, p. 227.

Anas crecca × A. boschas, *Leverk. J. f. O.* 1890, p. 229.

Adult male. Head and upper neck chestnut; a glossy green patch on each side of the head from the eyes backward to upper nape; a narrow buffy line from the gape upwards along the base of the upper mandible and from thence to the eye, bordering above and below the anterior part of the green patch; chin black; hind-neck, back, and scapulars with narrow grey and black wavy lines; outer scapulars buff, broadly edged with black on the outer web; upper tail-coverts black, edged with buffish brown; on the middle of the neck a collar of whitish and black cross lines; breast and abdomen white, the former with round subapical black spots; sides and flanks waved with narrow black lines; central under tail-coverts

velvet-black, the lateral ones of a buff colour, with a band of black at the base; upper wing-coverts lead-grey, the greater row whitish buff, darker towards the inner ones; wing-speculum on the secondaries velvety black, with a white apical band on the outer half, glossy green on the inner half; the first tertial velvet-black on the outer web; primaries and tail-feathers greyish brown, the latter with pale edges; under wing-coverts grey, edged with white, the central ones and the axillaries wholly white: bill nearly black; iris hazel; legs, toes, and membranes brownish grey. Total length 14·5 inches, wing 7·25, tail 3, culmen 1·6, tarsus 1·1.

Female. General colour of the upper parts dark brown, each feather with reddish-brown edges; upper part of the head darker than the sides, which are whitish, thickly speckled with black; a black line behind the eyes; chin and throat whitish; the feathers of the back and scapulars with two narrow transverse bars of buffy brown; underparts whitish, with a reddish tinge on the breast, each feather, except those of the belly, with obscure dark centres: wing as in the male, but somewhat duller.

Young in first plumage closely resembles the female, but the wing-coverts have pale edgings, and the dark centres of the feathers appear also on the belly.

Males in moulting plumage resemble the adult females.

"*Nestling* is yellowishwhite on the underparts, buff on the forehead and throat; a dark brown streak from the forehead to the crown, which, with the upper parts, is brown; a dark loral streak, and two other streaks from behind the eye to the nape, on each side" (*Yarrell*).

Hab. The Palæarctic Region, wintering in Northern Africa as far south as Shoa, in Arabia, Persia, India, Ceylon, Burmah, China, and Japan; accidentally in Greenland, and along the Atlantic coast of North America.

a, b. ♂ ♀ ad. st.	Gt. Britain.	Purchased.
c. ♂ ad. sk.	Gt. Britain.	Yarrell Coll.
d–g. ♀ ad. et pull. st.	Kirkwall.	Purchased.
h. ♂ ad. sk.	N. Uist.	H. J. Elwes, Esq. [P.].
i. ♂ ad. sk.	Nairnshire, N.B., March.	H. F. Rose, Esq. [P.].
k. ♀ ad. sk.	St. Andrew's, Fifeshire, Aug. (*R. G. W. R.*).	Tweeddale Coll.
l. ♂ ad. sk.	R. Eden, St. Andrew's, Sept. (*R. G. W. R.*).	Tweeddale Coll.
m. ♀ ad. st.	Carmarthen.	Montagu Coll.
n. Ad. st. [*isabelline var.*]	Pembrokeshire.	Earl of Cawdor [P.].
o, p. ♂ ♀ ad. st.	Merton, Norfolk, May.	Lord Walsingham [P.].
q, r. ♂ ♀ ad. st.	Tring, Herts, May.	Hon. Walter Rothschild [P.].
s, t. ♂ ♀ ad. sk.	Avington, Feb. (*R. B. S. & G. E. Shelley*).	R. Bowdler Sharpe, Esq. [P.].

u. ♂ imm. sk.	Aboyne.	R. Bowdler Sharpe, Esq. [P.].
v. ♂ ad. sk.	Ljolland, Denmark, March (*Benzon*).	Hume Coll.
w. ♂ juv. sk.	Hungary, Aug. (*C. Ede*).	Hungarian National Museum [P.].
x. ♂ ad. sk.	Valencia, Spain, Dec. (*H. Saunders*).	Tweeddale Coll.
y. ♀ ad. sk.	Malaga, Spain, Oct. (*H. Saunders*).	Tweeddale Coll.
z. ♀ ad. sk.	Biskra.	H. J. Elwes, Esq. [P.].
a', *b'*, *c'*. ♂ ♀ ad. sk.	Egypt, March (*G. E. S.*).	Shelley Coll.
d'. ♀ ad. sk.	Alexandria, Feb.	Shelley Coll.
e', *f'*. ♀ ad. sk.	Socotra (*Balfour*).	Shelley Coll.
g', *h'*. ♀ ad. sk.	Socotra (*Balfour*).	The British Association [P.].
i'. ♂ ad. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
k'. ♂ juv. sk.	Bonderjohan, Ob R., Sept.	Dr. O. Finsch [C.].
l', *m'*. ♂ ♀ ad. sk.	Valley of the Yen-e-sai, E. Siberia, lat. 66½°, June (*H. S.*).	Seebohm Coll.
n'. ♂ ad. sk.	Samarkand, March.	Seebohm Coll.
o', *p'*, *q'*. ♂ ♀ ad. sk.	Kashgar (*Bellew*).	India Museum [P.].
r'. ♀ ad. sk.	Shahidula, Oct. (*Forsyth*).	India Museum [P.].
s', *t'*, *u'*. ♀ ad. sk.	Ladak (*Strachey*).	India Museum [P.].
v'. ♂ ad. sk.	Bala Morghab, Jan. (*Aitchison*).	Afghan Delimitation Comm. [P.].
w', *x'*. ♂ ♀ ad. sk.	Kandahar, Dec.	Lt.-Colonel Swinhoe [P.].
y'. ♂ ad. sk.	Mekran Coast, Dec.	Hume Coll.
z', *a''*. ♀ ad. et ♂ juv. sk.	River Jhelum, Nov. (*A. O. H.*).	Hume Coll.
b'', *c''*. ♀ ad. et ♂ juv. sk.	Karachi, Oct., Dec. (*E. A. Butler*).	Hume Coll.
d''–h''. ♂ ♀ ad. sk.	Sambhur, Jan., Feb. (*R. M. Adam*).	Hume Coll.
i'', *k''*. ♀ ad. et ♂ imm. sk.	Gurgaon, Feb., May (*W. N. Chill*).	Hume Coll.
l''. ♂ ad. sk.	Delhi.	Hume Coll.
m''. ♂ ad. sk.	Dehra Dhoon, Feb. (*G. King*).	Hume Coll.
n''. ♀ ad. sk.	Near Koteghur, March.	Hume Coll.
o''–r''. ♂ ♀ ad. et ♂ imm. sk.	Etawah, Nov.	Hume Coll.
s''–w''. ♂ ad. sk.	Allahabad, Feb. (*A. O. H.*).	Hume Coll.
x''. ♂ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
y''. ♂ ad. sk.	Benegunge, Oudh, Jan. (*A. Anderson*).	Seebohm Coll.
z'', *a*³. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
*b*³. ♂ ad. sk.	Nepal (*Hodgson*).	India Museum [P.].
*c*³. ♀ ad. sk.	Nepal.	J. Scully, Esq. [P.].

d^1–i^3. ♂ ♀ ad. sk.	Native Sikhim, March (*L. Mandelli*)	Hume Coll.
k^3. ♀ ad. sk.	Sikhim.	H. J. Elwes, Esq. [P.].
l^3. ♂ ad. sk.	Darjeeling.	India Museum [P.].
m^3. ♂ ad. sk.	Assam (*McClelland*).	India Museum [P.].
n^3, o^3, p^3. ♂ ad. sk.	Upper Assam (*A. W. Chennell*).	Tweeddale Coll.
q^3, r^3. ♂ ♀ ad. sk.	Manipur, March (*A. O. H.*).	Hume Coll.
s^3, t^3. ♀ ad. sk.	Bengal (*Falconer*).	India Museum [P.].
u^3. ♂ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
v^3, w^3. ♂ ♀ ad. sk.	Calcutta, Feb. (*A. O. H.*).	Hume Coll.
x^3. ♀ ad. sk.	Deccan (*Sykes*).	India Museum [P.].
y^3. ♀ ad. sk.	Tonghoo.	Tweeddale Coll.
z^3. ♀ ad. sk.	Lower Pegu, Feb.	E. W. Oates, Esq. [C.].
a^4. ♀ ad. sk.	Nr. Thatone, Dec. (*W. Davison*).	Hume Coll.
b^4. ♀ ad. sk.	Malacca, Dec. (*Maingay*).	Tweeddale Coll.
c^4. ♂ ad. sk.	S. Manchuria.	H. M. James, Esq. [P.].
d^4–h^4. ♂ ♀ ad. sk. et ♂ ad. st.	China.	J. R. Reeves, Esq. [P.].
i^4, k^4, l^4. ♀ ad. et ♂ juv. sk.	China (*Tuckett*).	Tweeddale Coll.
m^4, n^4. ♂ ♀ ad. sk.	Kiukiang Canal, China.	Lieut. Davies [P.].
o^4. ♀ ad. sk.	Kiukiang, Oct.	F. W. Styan, Esq. [P.].
p^4, q^4, r^4. ♂ ♀ ad. et ♂ juv. sk.	Amoy, China, Feb., Nov. (*R. Swinhoe*).	Seebohm Coll.
s^4. ♂ ad. sk.	Amoy, China, winter (*R. Swinhoe*).	Salvin-Godman Coll.
t^4. ♂ ad. sk.	Yezo, Japan.	Tweeddale Coll.
u^4. ♀ ad. sk.	S. Yezo, Japan, Oct. (*Blakiston*).	Seebohm Coll.
v^4. ♂ ad. sk.	Corea.	C. W. Campbell, Esq. [P.].
w^4. ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
x^4, y^4. ♀ ad. sk.	Nagasaki, Japan, Jan., Nov.	F. Ringer, Esq. [P.].
z^4. ♂ ad. sk.	Kechi village, Tsu-shima, Jan. (*P. A. Holst*).	Seebohm Coll.
a^5. Skelcton.	England.	Purchased.
b^5. Skeleton.	Würtemberg.	Dr. Günther [P.].
c^5, d^5, e^5. Skeletons (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].
f^5, g^5, h^5. Skulls.		
i^5–n^5. Sterna.		
o^5. Sternum with shoulder-girdle.	England.	T. Ingall, Esq. [P.].

HYBRID.

Nettion crecca × *Anas boscas*.

p^5, q^5. ♂ ♀ ad. sk.	Maldon, Essex (*Vigors Coll.*).	Zoological Society. (Types of *Querquedula glocitans*, Vigors.)

3. Nettion carolinense.

Anas crecca, var., *Forst. Phil. Trans.* lxii. p. 419 (1772); *Adams, Ibis*, 1878, p. 431 (Michalaski).

American Teal, *Penn. Arct. Zool.* ii. p. 569, n. 504 (1785); *Lath. Syn.* iii. 2, p. 554, n. 90 (1785); *id. Gen. Hist.* x. p. 371 (1824); *Saund. Yarrell's Hist. Brit. B.* iv. p. 391 (1884–85).

Anas carolinensis, *Gm. S. N.* i. 2, p. 533, n. 103 (1778); *Lath. Ind. Orn.* ii. p. 874, n. 101 (1790); *Dum. Dict. Sc. Nat.* vi. p. 399 (1817); *Jard. & Selby, Ill. Orn.* iii. pl. cxlvi (1835); *Aud. Syn.* p. 281 (1839); *Vig. Beech. Voy., Orn.* p. 30, pl. xiii. (1839); *Aud. B. Am.* vi. p. 281, pl. 392 (1843); *Giraud, B. Long Isl.* p. 314 (1844); *DeKay, N. Y. Zool.* ii. p. 340 (1844); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Lemb. Av. Cub.* p. 114 (1850); *Reinh. Vid. Med.* 1853, p. 84 (Greenland) (1854); *Wied, J. f. O.* 1859, p. 172; *Reinh. Ibis*, 1861, p. 13 (Greenland); *Trippe, Pr. Ess. Inst.* vi. p. 119 (Minnesota) (1871); *Gieb. Thes. Orn.* i. p. 346 (1872); *Seebh. Hist. Brit. B.* iii. p. 549 (1885); *A. O. U. Check-list*, p. 116, n. 139 (1886); *Turner, Contr. N. H. Alaska*, p. 132 (Alaska) (1886); *Nels. Nat. Hist. Coll. in Alaska*, p. 68 (1887); *Ridgw. Man. N. Am. B.* p. 94 (1887); *Hatch, B. of Minnes.* p. 44 (1891).

Anas americana, *Bonn. (nec Gm.) Enc. Méth.* i. p. 155 (1791).

Anas migratoria, *Bartr. Travels*, p. 295 (1791).

Anas crecca, *Wils. (nec Linn.) Am. Orn.* viii. p. 101, pl. 60. f. 1 (1814); *Bp. Obs. Nomencl. Wilson*, n. 263 (1825); *id. Syn.* p. 386 (1828); *Aud. Orn. Biogr.* iii. p. 218 (1835), v. p. 616, pl. 228 (1839); *Schleg. Mus. P.-B.*, Anseres, p. 52 (part.) (1866).

Anas sylvatica, *Vieill. N. D.* v. p. 167 (1816).

Querquedula carolinensis, *Steph. Gen. Zool.* xii. 2, p. 148 (1824); *Bp. Comp. List*, p. 57 (1838); *Eyt. Mon. Anat.* p. 124 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 137 (1844); *id. Gen. B.* iii. p. 616, n. 2 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 188–89 (1845); *Jard. Ann. & Mag. N. H.* xx. p. 377 (Tobago) (1847); *Gosse, B. Jam.* p. 408 (1847); *Rchnb. Syn. Av.*, Natatores, t. 90. f. 2345 (1850) (*ex Beechey's Voy.*), t. 100. ff. 2769–70 (1850) (*ex Audubon*); *Baird, Stansbury's Rep.* p. 322 (1852); *Woodh. Sitgr. Rep.* p. 103 (1853); *Bp. Compt. Rend.* xxxviii. p. 664 (1854), xliii. p. 650, n. 103 (1856); *Newb. P. R. R. Rep.* vi. p. 102 (1857); *Sclat. P. Z. S.* 1857, p. 215 (Orizaba); *Gundl. J. f. O.* 1857, p. 229 (Cuba); *Cass. U.S. Expl. Exp., Mamm. & Orn.* p. 342 (1858); *Heerm. P. R. R. Rep.* x. pt. vi. p. 69 (1859); *Sclat. & Salv. Ibis*, 1859, p. 231 (Honduras); *Moore, P. Z. S.* 1859, p. 65 (Honduras); *Sclat. ibid.* pp. 237, 369, 1860, p. 254 (Orizaba); *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *Gundl. J. f. O.* 1862, p. 92 (Cuba); *March, Pr. Acad. Philad.* 1864, p. 72 (Jamaica); *Eyt. Syn. Anat.* p. 76 (1869); *Coues, Key*, p. 287 (1872); *id. Check-list*, n. 495 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Coues, Birds N.-West*, p. 565 (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 385; *Nicholls, Zoolog.* 1880, p. 70 (Devon); *Fellowes, ibid.* (Hampshire); *Sclat. P. Z. S.* 1880, p. 521; *Cory, B. Bahama I.* p. 187 (1880); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Coues, Check-list*, 2nd ed. p. 114, n. 715 (1882); *Salv. Cat. B. Strickl. Coll.* p. 535 (1882); *B. O. U. List Brit. B.* p. 127 (1883); *Hartl. J. f. O.* 1883, p. 282 (Alaska); *Cory, List B. W. Ind.* p. 31 (1885); *Wells, List B. Grenada*, p. 10 (1886); *Saunders, P. Z. S.* 1888, p. 469 (Devon); *id. Man. Brit. B.* p. 421 (1889); *Cory, Auk*,

1888, p. 64; *id. B. W. Ind.* p. 265 (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 301 (1891).

? Querquedula americana, *Brehm, Isis*, 1830, p. 998 (descr. nulla); *id. Vög. Deutschl.* p. 887 (1831); *id. Vogelf.* p. 376 (1855).

? Querquedula grœnlandica, *Brehm, Isis*, 1830, p. 998 (descr. nulla); *id. Vög. Deutschl.* p. 887 (1831).

Anas (Boschas) crecca, var., *Sw. & Rich. Faun. Bor.-Am.* ii. pp. 400, 403 (1831).

Boschas carolinensis, *Jard. edit. of Wilson*, iii. p. 124 (1832); *Sw. Class. B.* ii. p. 367 (1837).

Boschas crecca americana, *Denny, P. Z. S.* 1847, p. 40.

Nettion carolinensis, *Baird, B. N. Am.* p. 777 (1858); *id. Mex. B. Surv.* ii. pt. ii. *Birds*, p. 26 (1859); *id. Cat. N. Am. B.* n. 579 (1859); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 254 (1860); *Coues, Pr. Ac. Philad.* 1861, p. 238 (Labrador); *Hayd. Rep.* 1862, p. 175; *Ross, Canad. Nat.* vii. p. 152 (McKenzie R.) (1862); *id. Nat. Hist. Rev.* (2) ii. p. 287 (1862); *Dresser, Ibis*, 1866, p. 43 (Texas); *Coues, Pr. Acad. Philad.* 1866, p. 98 (Arizona); *Gundl. Rep. Fis.-Nat. Cuba*, i. p. 389 (Cuba) (1866); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1867); *Dall & Bann. Tr. Chic. Ac.* i. p. 297 (Alaska, breeding) (1869); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *G. R. Gr. Hand-list*, iii. p. 83, n. 10664 (1871); *Allen, Bull. Mus. Comp. Zool.* iii. p. 183 (Kansas and Utah) (1872); *Trippe, Pr. Bost. Soc. N. H.* xv. p. 241 (Iowa) (1872); *Aiken, ibid.* p. 210 (Colorado) (1872); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 314 (Mexico) (1874); *Gundl. J. f. O.* 1875, p. 381 (Cuba); *Ridgw. Nom. N. Am. B.* n. 612 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 2 (1884); *Nehrl. J. f. O.* 1885, p. 147; *Matsch. u. Ziemer, ibid.* p. 191.

Querquedula americana, *Murr. Edinb. New Philos. Journ.* ix. p. 230 (1859).

Nettion carolinense, *Blakist. Ibis*, 1862, p. 9, 1863, p. 147 (Brit. N. Am.); *Brown, Ibis*, 1868, p. 426 (Vancouver I.).

Querquedula (Nettion) carolinensis, *Coues, Key N. Am. B.* p. 695, f. 482 (1884).

Querquedula crecca, var. carolinensis, *Dub. Faun. Vert. Belg., Ois.* ii. p. 453 (1892).

Adult male. Similar to that of *N. crecca*, but the whitish line which surrounds the green patch on the sides of the head, and passes down to the base of the bill, is almost obsolete; the scapulars are uniform pale slate-grey, with no white, and there is a broad whitish crescent on each side of the breast in front of the shoulder.

Female. Apparently indistinguishable from that of *N. crecca*.

Hab. Northern America, from Alaska and Greenland, to Mexico. Honduras, and the West Indies: accidentally in Europe.

a, b. ♂ ♀ ad. st.	N. America.	Audubon Coll.
c. ♂ imm. sk.	N. America.	H. J. Elwes, Esq. [P.].
d. ♀ ad. sk.	N. America.	Capt. Kellett & Lieut. Wood [P.].
e, f. ♂ ♀ ad. st.	Arctic Land Exped.	Sir G. Back [P.].
g, h. ♀ ad. sk.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].

i, k. ♀ ad. et ♂ imm. sk.	British Columbia.	J. K. Lord, Esq. [P.].
l. ♂ ad. sk.	Washington, D.C.	Salvin-Godman Coll.
m. ♀ juv. sk.	Keewaken Val., Oregon, Aug. (*H. W. Henshaw*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Utah, Nov. (*H. W. H.*).	Salvin-Godman Coll.
o, p. ♂ ♀ ad. sk.	49th Parallel.	N. American Bound. Comm. [P.].
q, r. ♂ ad. sk.	Canada.	Governmt. of Canada [P.].
s. ♂ ad. sk.	Repulse Bay.	Dr. J. Rae [P.].
t. ♀ ad. sk.	Ontonagon, Michigan, Oct. (*A. J. Dayan*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Hudson R., Albany, New York (*J. H. Hurst*).	Tweeddale Coll.
v. ♂ juv. sk.	Lyon's Falls, New York, Dec. (*A. J. D.*).	Salvin-Godman Coll.
w–e'. ♂ ♀ ad. sk.	Corpus Christi, Texas, Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
f'. ♂ juv. sk.	Mexico.	Salvin-Godman Coll.
g'. ♀ ad. sk.	Hermosillo, State of Sonora, Mexico, Nov. (*F. Ferrari-Perez*).	Salvin-Godman Coll.
h', i'. ♂ ♀ ad. sk.	Presidio, Mexico, Jan. (*A. Forrer*).	Salvin-Godman Coll.
k', l', m'. ♂ ♀ ad. sk.	Zacatecas, Mexico, Feb. (*W. B. Richardson*).	Salvin-Godman Coll.

4. Nettion castaneum.

Anas punctata, *Cuv. in Mus. Paris* (*nec Burch.*) (♂, type examined); *Less. Tr. d'Orn.* p. 634 (Java!) (1831); *Gould, B. Austr.* vii. pl. 11 (pt. xix. 1845); *Pucher. Rev. et Mag. de Zool.* 1851, p. 549; *Macgill. Narr. Voy. Rattlesn.* ii. p. 358 (1852); *G. R. Gr. P. Z. S.* 1858, p. 198; *id. Cat. B. New Guin.* p. 63 (1859); *Gould, Handb. B. Austr.* ii. p. 365 (1865); ? *Sclat. P. Z. S.* 1865, p. 861 (Zool. Gard.); *Schleg. Mus. P.-B.*, Anseres, p. 47 (1866); *Rams. Ibis*, 1866, p. 235; *Müll. P. Z. S.* 1869, p. 280; *Sclat. P. Z. S.* 1870, p. 900; *Newt. P. Z. S.* 1871, pp. 649, 650 (part.), f. 1 (sternum), f. 2 (trachea, with bulla ossea); *Gieb. Thes. Orn.* i. p. 360 (1872); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 195, 216, 219 (1876); *id. P. Z. S.* 1877, p. 346; *Rchnw. J. f. O.* 1877, p. 218 (Celebes); *Blas. J. f. O.* 1883, pp. 116, 121 (Celebes); *Rchnw. ibid.* p. 122 (= castanea, *Eyton*) (Celebes); *Hartert, Kat. Vogelsamml.* p. 230 (1891).

Mareca castanea, *Eyton, Mon. Anat.* p. 119. pl. 22 (♂) (1838); *G. R. Gr. Gen. B.* iii. p. 614, n. 4 (1845); *Rchnb. Syn. Av.*, Natatores, t. 86. ff. 2330–31 (1850) (*ex Gould*); *Eyton, Syn. Anat.* p. 71 (1869).

Mareca punctata, *G. R. Gr. List B. Brit. Mus.* iv. p. 134 (1844); *Bp. Compt. Rend.* xliii. p. 650, n. 119 (1856); *G. R. Gr. Hand-list*, iii. p. 81, n. 10631 (1871); *Meyer, Verh. z.-b. Ges. Wien*, 1881, p. 767 (Sumba).

Querquedula punctata, *Licht. Nomencl. Av.* p. 102 (New Holland) (1854).

? Anas punctata, var., *G. R. Gr. P. Z. S.* 1859, p. 166 (New Caledonia); *id. Cat. B. Trop. Isl.* p. 55 (New Caledonia) (1859); ? *Verr. & Des Murs, Rev. et Mag. de Zool.* 1860, p. 442 (New Caledonia); *Jouan, Mém. Soc. Cherb.* ix. pp. 100, 242 (New Caledonia) (1863).

Anas castanea, *A. Newt. P. Z. S.* 1871, p. 649 (note); *Rams. Pr. Linn. Soc. N. S. W.* iii. pp. 38, 154 (bulla ossea only in male) (1878); *Sclat. P. Z. S.* 1880, pp. 452, 518, 535, 1881, pp. 452, 454; *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 51 (1882); *Salvad. Orn. Pap. e Mol.* iii. p. 396 (1882); *Salv. Cat. B. Strickl. Coll.* p. 530 (1882); *Sclat. List Vert. An.* 8th ed. p. 432 (1883); *Blas. Zeitschr. ges. Orn.* ii. p. 326 (1885); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Rams. Tab. List*, p. 22, n. 669 (1888); *Tristr. Cat. Coll. B.* p. 49 (1889); *North, Cat. Nests & Eggs Austr. B.* p. 341 (1889); *Keartland, Vict. Nat.* vii. p. 46 (Australia) (1890).

Anas (Virago) castanea, part., *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 658 (1877).

Virago castanea, *Stejn. Kingsl. Stand. Nat. Hist.* iv. p. 145 (1885).

Adult male. Head and neck dark glossy green, with bronze reflections in some lights; mantle and back black, each feather edged with chestnut; rump, upper and under tail-coverts deep black, with a green gloss; breast and abdomen chestnut, with round black spots, those on the sides and flanks larger; on the lower flanks a whitish-buff band bordering exteriorly the black under tail-coverts; scapulars and wings dark olive-brown, the former narrowly edged with chestnut; the last row of upper wing-coverts white, slightly tinged with reddish; wing-speculum on the secondaries velvety black, with a metallic green band, glossed with coppery red, on the upper half; at the tip of the secondaries a reddish-white narrow band; under wing-coverts olive-brown, some of the inner ones white; axillaries white; tail brown-black: "bill bluish lead-colour, nail and the edges of the upper mandible black, the under mandible crossed near the tip by a band of reddish flesh-colour; irides hazel; feet lead-colour, with the membranes of a somewhat darker hue" (*Gould*). Total length about 18·5 inches, wing 9, tail 4·5, culmen 1·5, tarsus 1·4.

Female. Upper part of the head dark brown, with some light edges to the feathers, sides of the head paler, thickly streaked with dusky; chin and throat whitish, immaculate; upper parts brown, the feathers edged with pale reddish or greyish; lower back and rump almost uniform brown; the feathers of the underparts light fulvous or rufescent-grey on the margins, with obscure brown spots in the centre, especially on the breast and sides, each feather having a broad central mark of blackish brown; sides and under tail-coverts darker than the rest of the underparts; wing-coverts uniform dark greyish brown, with an olive lustre, the greater or last row white, forming a band broader outwardly than inwardly; speculum on the secondaries velvety black, tipped with a white band, but the three middle secondaries metallic green on the outer web; primaries and tail-feathers dark brown; under wing-coverts dark brown, the greater ones dark grey and the innermost, with the axillaries, white.

Total length about 16 inches, wing 7·5, tail 3·5, culmen 1·4, tarsus 1·3.

Young in down. Upper parts brown, the upper part of the head darker; sides of the head, fore-neck, and lower parts whitish, with a rufescent tinge; a dark brown band from the lores, through the eyes backwards; a small dark spot at the gape; two whitish-rufescent spots on the back, at the base of the wings, and two more on the sides of the rump.

Hab. Australia, New Zealand, and New Caledonia (?), and as a straggler in Celebes and Java.

a. ♂ ad. st.	Australia.	Hardwicke Bequest.
b. ♂ ad. sk.	Australia.	Purchased.
c, d. ♂ ad. sk.	Australia.	Salvin-Godman Coll.
e. ♂ ad. sk.	Sydney?	Tweeddale Coll.
f. ? ♀ imm. sk.	Port Essington.	J. B. Jukes, Esq. [P.].
g. ? ♀ imm. sk.	N. Australia.	Dr. Sibbald [P.].
h, i. ♂ ad. et ? ♀ ad. st.	New S. Wales.	Australian Museum [P.].
k. ♂ ad.? sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
l. ♂ imm. sk.	N.W. Australia, April.	J. R. Elsey, Esq. [P.].
m. ♂ imm.? sk.	Perth Flats, W. Australia, May.	Gould Coll.
n, o. ♂ ad. et ? ♀ ad. sk.	S. Australia.	Sir G. Grey [P.].
p. ? ♀ ad. sk.	S. Australia.	Gould Coll.
q. Pull. sk.	Australia.	Purchased.
r. ♀ ad. sk.	Flinders I., Bass' Straits, Jan. (*F. M. Rayner*).	Voyage of H.M.S. 'Alert' [C.].
s, t. ? ♀ ad. st.	Tasmania.	R. Gunn, Esq. [P.].
u. ♂ ad. sk.	Recherche Bay, Tasmania, Dec.	Gould Coll.
v. ♀ ad. sk.	R. Derwent, Tasmania, Nov.	Gould Coll.
w, x. ♂ ♀ ad. sk.	Port Arthur, Tasmania, Oct.	J. B. Jukes, Esq. [P.].
y. ♀ ad.? sk.	Otago, New Zealand, May.	Hume Coll.

5. Nettion gibberifrons. (Plate II. fig. 2.)

Anas (Mareca) gibberifrons, *S. Müll. Verh. Land- en Volkenk.* p. 159 (Celebes) (1839–44).

Mareca gibberifrons, *G. R. Gr. Gen. B.* iii. p. 614, n. 5 (1845); *Wald. Tr. Zool. Soc.* viii. p. 102 (1872); *Meyer, Ibis*, 1879, p. 144; *Wald. Tweedd. Orn. Works*, p. 201 (1881).

Querquedula gibberifrons, *Bp. Compt. Rend.* xliii. p. 650, n. 102 (1856); *Hutt. Cat. B. New Zeal.* p. 36 (1871); *Finsch, J. f. O.* 1870, p. 356, 1872, p. 188; *Buller, B. New Zeal.* p. 250 (1873); *Finsch, J. f. O.* 1874, p. 173; *Sharpe, Ibis*, 1875, p. 329; *Layard, Ibis*, 1878, p. 266 (New Caledonia); *Hutt. Trans. N. Z. Inst.* xii. p. 271 (1880); *Ibis*, 1881, p. 162; *Milne-Edw. Ann. Sc. Nat., Zool.* (6) xiii. Art. 4, p. 41 (1882); *Vorderm. N. T. N. I.* xlvi. p. 90 (Java), p. 240 (1886); *Smith, Trans. N. Z. Inst.* xxi. p. 221 (Lake Brunner) (1888); *Cab. J. f. O.* 1888, p. 118; *Vorderm. N. T. N. I.* xlix. p. 419 (1889).

? Anas punctata, var., *G. R. Gr. P. Z. S.* 1859, p. 166 (New Caledonia);

id. Cat. B. Trop. Isl. p. 55 (1859); *Verr. & Des Murs, Rev. et Mag. Zool.* 1860, p. 442.

Anas gibbifrons, *Wall. P. Z. S.* 1863, p. 487 (Flores, Timor); *Finsch, Neu-Guin.* p. 183 (1865); *Eyt. Syn. Anat.* p. 94 (1869).

Anas punctata, *Gould, Handb. B. Austr.* ii. pp. 365, 366 (part.) (1865); *Sclat. P. Z. S.* 1865, p. 861; *Newt. P. Z. S.* 1871, p. 649, fig. 2 (sternum), fig. 4 (trachea with bulla ossea).

Anas gibberifrons, *Schleg. Mus. P.-B.*, Anseres, p. 58 (1866); *Buller, Ibis*, 1870, p. 459; *Hutt. Cat. B. New Zeal.* p. 36 (1871); *Gieb. Thes. Orn.* i. p. 353 (1872); *Hartl. Ibis*, 1877, p. 335; *id. Vög. Madag.* pp. 364, 365 (1877); *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 209 (1877), iii. p. 38 (1878); *Rosenb. Malay. Archip.* p. 279 (Celebes) (1878–79); *Finsch, Ibis*, 1880, p. 397; *Sclat. P. Z. S.* 1880, pp. 452, 519, 1882, p. 453, pl. xxxiii.; *Selat. & Salv. Ibis*, 1882, p. 538 (note); *Salvad. Orn. Pap. e Mol.* iii. p. 398 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 19; *id. Vög. zool. Gärt.* p. 52 (1882); *Vorderm. N. T. N. I.* xli. p. 219 (Java) (1882); *Sclat. List Vert. An.* 8th ed. p. 432 (1883); *Blas. Zeitschr. ges. Orn.* ii. p. 325 (Celebes) (1885), iii. p. 171 (1886); *Rams. Pr. Linn. Soc. N. S. W.* (2) i. p. 1151 (1886); *id. Tab. List*, p. 22, n. 670 (1888); *Bull. B. New Zeal.* 2nd ed. p. 261 (1888); *Tristr. Cat. Coll. B.* p. 49 (E. Timor) (1889); *North, Cat. Nests and Eggs Austr. B.* p. 342 (1889); *Keartl. Vict. Nat.* vii. p. 46 (Australia) (1890); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Wiglesw. Aves Polyn.* p. 70 (1892).

Anas muta, *S. Müll.* (ubi ?), *fide Schleg. Mus. P.-B.*, Anseres, p. 58, *in syn.* A. gibberifrontis.

Anas gracilis, *Buller, Ibis*, 1869, p. 41 (New Zealand); *Haast, l. c.* p. 42 (note) (South Australia); *Finsch, ibid.* p. 380 (=gibberifrons); *Buller, Trans. N. Z. Inst.* ii. p. 392 (1869); *Hutton, Trans. N. Z. Inst.* xii. p. 271 (1880).

Anas (Querquedula) gibberifrons, *Finsch, Ibis*, 1869, p. 380.

Mareca castanea, *Marie* (*nec Eyt.*), *Act. Soc. Linn. Bord.* xxvii. p. 328 (New Caledonia) (1870); *id. Ibis*, 1877, p. 363; *Layard, Ibis*, 1882, pp. 538, 544.

Nettion gibberifrons, *G. R. Gr. Hand-list*, iii. p. 83, n. 10663 (1871).

Anas (Virago) castanea, part., *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 658 (1877).

Anas castanea, *Rams.* (*nec Eyt.*) *Pr. Linn. Soc. N. S. W.* iii. p. 115 (Hall Sound, Ethel River) (1878), p. 301 (S. New Guinea) (1879), iv. p. 102, n. 212 (Port Moresby, South Cape) (1879); *Sclat.* (*nec Eyt.*) *P. Z. S.* 1879, p. 827 (Zool. Gard.); *id. List Vert. An. Zool. Soc. Lond.* 1879, p. 367; *Hutt. Trans. N. Z. Inst.* xii. p. 272 (1880); *Salvad. Ann. Mus. Civ. Gen.* xviii. p. 402, n. 6 (1882).

Adult male. Upper part of the head dark brown, with the edges of the feathers reddish or greyish; sides of the head paler, thickly streaked with black or brown; chin and throat white, immaculate; upper parts brown, the feathers edged with pale reddish, the feathers of the lower back and rump almost uniform, with edges scarcely paler; the feathers of the underparts light fulvous on the margins, with obscure brown spots in the centre, especially on the breast and sides of the body, each feather having a broad central mark of blackish brown; sides and under tail-coverts darker than the rest of the underparts; wing-coverts dark greyish brown, with an olive lustre, the greater row white, forming a band broader

outwardly than inwardly; speculum on the secondaries velvety black, tipped with a white band, but the three middle secondaries metallic green on the outer web; primaries and tail-feathers dark brown; under wing-coverts dark brown, the greater ones dark grey, the innermost and the axillaries white: "irides yellowish brown; bill bluish black, on the edges somewhat greenish, with the nail black; the tip of the lower mandible yellowish; feet lead-colour, with a yellowish tint" (*S. Müller*). Total length 17 inches, wing 8, tail 4, bill 1·5, tarsus 1·25.

Female. Somewhat smaller than the male, and paler: "iris brick-red; bill black, with a yellow band across the middle of the lower mandible; feet greyish purple" (*Loria*). Total length 15·5 inches, wing 7·5, tail 3·5.

This species is absolutely similar to the supposed female of *N. castaneum*, both in colour and dimensions, so that I am utterly unable to distinguish it; still it seems quite certain that they are not identical, as birds in the plumage of *Anas gibberifrons* have bred, and, perhaps, are still breeding, in the Zoological Gardens of London.

In the Hon. W. Rothschild's collection there are two specimens, brought frozen in the flesh from Melbourne: one is in the plumage of the male *N. castaneum*, and the other in that of the supposed female of the same, and both, having been dissected, proved to be males; I have seen the testicles and the windpipe, with the bulla ossea, of both; one had the testicles enormously developed, showing that it was killed in the breeding-season.

I have seen also a male bird that lived in the Zoological Gardens of London, which has the plumage of *N. gibberifrons*, or female *N. castaneum*, but shows on the breast a distinct reddish tinge. Is this a hybrid of the two species?

We must wait for additional information in order to settle the question of the specific differences between *N. castaneum* and *N. gibberifrons*.

Hab. Celebes, Java, Timor, Flores, Sumba, and, if *N. castaneum* be not distinct, also Southern New Guinea, Australia, New Zealand, and New Caledonia.

a. Ad. st.	[Sumatra.]	Purchased.
b, c, d. Ad. et juv. sk.	Celebes.	Tweeddale Coll.
e. Ad. st.	Celebes.	E. Wilson, Esq. [P.].
f. ♂ ad. sk.	Makassar.	A. R. Wallace, Esq. [C.].
g, h. ♂ ♀ ad. sk.	Java (*Diard*).	Salvin-Godman Coll.
i–n. ♂ ♀ ad. sk. et st.	E. Timor.	A. R. Wallace, Esq. [C.].
o, p. ♂ ♀ ad. sk.	E. Timor (*A. R. Wallace*).	Tweeddale Coll.
q. ♀ ad. sk.	E. Timor (*A. R. Wallace*).	H. J. Elwes, Esq. [P.].
r. Ad. sk.	Flores.	A. R. Wallace, Esq. [C.].

6. Nettion albigulare. (Plate II. fig. 1.)

Querquedula andamanensis, *Tytler, Ibis*, 1867, p. 333, n. 89 (descr. nulla).

Nettion andamanensis, *G. R. Gr. Hand-list*, iii. p. 84, n. 10669 (1871).

Anas andamanensis, *Gieb. Thes. Orn.* i. p. 344 (1872).

Mareca punctata, "*Cuv.*"?, *Ball, J. A. S. B.* xli. 2, p. 290, n. 62 (Andamans) (1872); *id. Str. Feath.* i. p. 88 (1872).

Mareca albogularis, *Hume, Str. Feath.* i. p. 303 (Andamans) (Febr. 1873); *Blanf. Ibis*, 1873, p. 225.

Mareca gibberifrons, *Wald.* (*nec S. Müll.*) *Ibis*, 1873, p. 321; *Hume, Nests & Eggs*, p. 644 (Andamans) (1873); *id. Str. Feath.* ii. p. 316 (1874); *Wald. in Blyth's B. of Burm.* p. 166 (note) (1875); *Tweedd. Orn. Works*, p. 251 (Andamans) (1881).

Anas punctata, *Blyth* (*nec Cuv.*), *B. of Burm.* p. 166 (note) (1875).

Querquedula gibberifrons, *Hume* (*nec S. Müll.*), *Str. Feath.* viii. p. 115, n. 966 ter (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 243, pl. 32 (1880); *Hume, Nests & Eggs of Ind. B.* (*ed. Oates*), iii. p. 290 (1890).

? Anas andamanensis, *Selat. P. Z. S.* 1893, p. 614 (Zool. Gard. of Cologne).

Adult male. Upper part of the head brown; this colour covers also the upper part of the cheeks and gradually changes into the white of the lower part of the cheeks and throat; the brown of the cheeks with obsolete dusky streaks; round the eyes there is a ring of white feathers, broader below; in some specimens on the lores or at the base of the bill there are some white feathers; upper parts brown, the edges of the feathers of the back and scapulars pale brown: rump uniform; feathers of the breast and abdomen pale brown in the centre, and broadly margined with brownish fawn-colour, producing a mottled appearance; under tail-coverts brown, almost uniform; upper wing-coverts dark brown, greater or last row of upper wing-coverts white, forming a band, diminishing in breadth and tinged with brown inwardly; speculum velvety black, with a longitudinal coppery-green band on the middle, from the seventh to the ninth secondary, and bounded at the tip by a buff band; the first secondary broadly white on the outer web; tertials broadly velvety black on the outer web; primaries brown, with an olive lustre; under wing-coverts brown, the median ones tipped with white; axillaries white; tail brown: "legs and feet greenish blue to plumbeous, webs usually darker; bill plumbeous, nail black; in some the lower mandible, in one the terminal two-thirds of this, pink; irides reddish brown to deep reddish brown" (*Hume*). Total length 17 to 18 inches, wing 7 to 8, tail 4 to 4·2, culmen 1·4, tarsus 1·3 to 1·4.

Female. Similar to the male, but smaller, and the lower surface duller and the centerings of the feathers less marked, the green band on the wing-speculum more coppery. Total length 15·5 to 16 inches, wing 7·25 to 7·4, culmen 1·3 to 1·35.

Young birds are similar to the females, but the dusky markings of the under surface are even less distinct.

This species is very similar to *N. gibberifrons* and to the female of *N. castaneum*, but it differs in having the sides of the head darker and more uniform brown, with the darker streaks almost obsolete; besides it has a ring of white feathers round the eyes, and the first secondary with the outer web entirely or broadly edged with white.

Hab. Andaman Islands.

a–e. ♂ ♀ ad. sk.	S. Andamans, Feb. (*R. G. W. R.*).	Tweeddale Coll.
f, g. ♀ ad. et juv. sk.	S. Andamans, May, Dec. (*R. J. Wimberley*).	Tweeddale Coll.
h. ♀ ad. sk.	S. Andamans, April (*R. J. W.*).	Hume Coll.
i, k, l. ♂ ad. sk.	Port Mouat, S. Andamans, April (*W. Davison*).	Hume Coll.
m. ♂ ad. sk.	Port Blair, S. Andamans, May (*R. J. W.*).	Tweeddale Coll.
n–r. ♂ ♀ ad. sk.	Port Blair, S. Andamans, March to May (*W. Davison & R. J. Wimberley*).	Hume Coll.
s. ♀ ad. sk.	Port Blair, S. Andamans, June (*R. J. W.*).	R. Bowdler Sharpe, Esq. [P.].
t–y. ♂ ♀ ad. sk.	Dungleaf Creek, Andamans, Jan., Dec. (*W. Davison*).	Hume Coll.
z. Ad. sk.	Andamans.	Hume Coll. (Types of the species.)

7. Nettion bernieri.

? Sarcelle de Madagascar, *Sganzin, Notes sur les Mamm. et l'Orn. de Madag.* p. 48 (*Mém. Soc. Mus. d'Hist. Nat. de Strasb.* 1840).

Querquedula bernieri, *J. Verr. MS. in Mus. Vindob. et Paris*; *Hartl. J. f. O.* 1860, p. 173; *id. Orn. Beitr. Faun. Madag.* p. 82 (Madagascar) (1861) (type examined); *Poll. N. T. D.* i. p. 327 (1863); *Vinson, Voy. à Madag.* p. 308 (1865); *Verr. ibid.* Ann. B, p. 4 (1865).

Anas bernieri, *Vinson, in Dupré, Trois mois à Madag.* p. 262 (1863); *Hartl. Vög. Madag.* p. 363 (1877); *Sclat. P. Z. S.* 1880, p. 519; *Salvad. P. Z. S.* 1884, p. 175; *Pelz. u. Lor. Ann. k. naturh. Hofmus.* iii. p. 58 (1888); *Sibree, Ibis*, 1892, p. 270.

Anas assimilis, part., *Schleg. Mus. P.-B.*, Anseres, p. 59 (1866); *id.* (*nec Forst.*) *P. Z. S.* 1866, p. 426 (N.W. Coast of Madagascar); *Gieb. Thes. Orn.* i. p. 344 (1872).

Dafila vinsoni, *Grand. Rev. et Mag. de Zool.* 1867, p. 87 (Madagascar), p. 255 (=D. bernieri).

Dafila bernieri, *Grand. l. c.* p. 255.

Querquedula gibberifrons, *Grand.* (*nec S. Müll.*) *Rev. et Mag. de Zool.* 1868, p. 6 (Madagascar).

Anas gibberifrons, *Schleg. & Poll.* (*nec S. Müll.*) *Rech. Faun. Madag., Ois.* p. 160 (1868).

Anas capensis, part., *G. R. Gr. Hand-list*, iii. p. 82, n. 10640 (Madagascar) (1871).

Anas gibberifrons, var. bernieri, *Milne-Edw. & Grand. Ois. Madag.* p. 726, pls. 270 (bird, bad), 271 (skeleton), 271*a* (osteology), 275, f. 3 (head) (1882).

Adult male. Head and neck pale reddish brown, thickly streaked with blackish; upper part of the head darker; back brown, the feathers narrowly edged with rufous-grey; rump and upper tail-coverts brown-olive, almost uniform; breast and abdomen dull reddish, with the centres of the feathers pale brown, producing a mottled appearance; longest under tail-coverts uniform brown; upper wing-coverts dark grey, the last row with the apical portion white, forming a white band, much broader outwardly and decreasing inwardly; speculum velvety black, bounded at the tip by a broad white band; primaries blackish brown; tertials and scapulars greyish brown, with narrow reddish margins; under wing-coverts dark brown; axillaries white; tail-feathers brown, with paler tips: "irides brown; beak and feet red" (*Grandidier*); "beak reddish brown, feet brown" (*Mus. Rothschild*). Total length 16 to 17 inches, wing 8, tail 4, culmen 1·5, tarsus 1·5. (*Mus. Rothschild.*)

Female. Similar to the male, only somewhat smaller, and the dusky spots on the underparts duller. (*Mus. Rothschild.*)

Immature bird. Similar to the adult, but the dusky spots on the underparts more longitudinal, streak-like; the brown under tail-coverts not uniform, but distinctly margined with reddish buff.

This species, although nearly related to *N. gibberifrons*, is perfectly distinct, having the bill much smaller and red, the spots on the breast paler and less defined; the upper wing-coverts more grey; the speculum velvety black, without the green longitudinal band; the white band at the tip of the secondaries broader, pure white, with no trace of rufous tinge; the axillaries pure white instead of brown.

The figure in the 'Oiseaux de Madagascar' is not exact and rather misleading, showing the speculum with blue and green gloss, the white band on the last row of the wing-coverts equally broad, instead of gradually diminishing in breadth inwardly, and the general colour too rufescent.

Hab. Madagascar.

a. Imm. sk. Madagascar (*Van Dam*). Shelley Coll.

8. Nettion capense.

Cape Wigeon, *Lath. Syn.* iii. 2, p. 519, n. 64 (1785).

Anas capensis, *Gm. S. N.* i. 2, p. 527, n. 98 (1788) (*ex Latham*); *Lath. Ind. Orn.* ii. p. 861, n. 73 (1790); *Bonn. Enc. Méth.* i. p. 148 (1791); *Vieill. N. D.* v. p. 154 (1816); *Dum. Dict. Sc. Nat.* vi. p. 368 (1817); *G. R. Gr. Gen. B.* iii. p. 616, n. 13 (1845); *Licht. Nomencl. Av.* p. 101 (1854); *Pelz. Novara Reis., Vög.* p. 138 (1865); *Chapm. Trav. in S. Afr.* ii. App. p. 422 (1868); *G. R. Gr. Hand-list*, iii. p. 82, n. 10640 (syn. emend.) (1871); *Gieb. Thes. Orn.* i. p. 346 (syn. emend.) (1872); ? *Gadow, J. f. O.* 1877, p. 389; *Salv. Cat. B. Strickl. Coll.* p. 534, n. 2602 (syn. emend.) (1882); *Salvad. P. Z. S.* 1884, pl. xiii.; *Hartert, Kat. Vogelsamml.* p. 231 (1891).

Mareca capensis, *Steph. Gen. Zool.* xii. 2, p. 139 (1824); *G. R. Gr.*

Gen. B. iii. p. 614, n. 6 (1845); *Layard, Birds S. Afr.* p. 351 (1867); *id. Ibis*, 1869, p. 26; *Ayres, Ibis*, 1869, p. 302 (Transvaal); *Gurn. in Anderss. B. Damara Land*, p. 339 (1872).

Chauliodus capensis, *Sw. Journ. Roy. Inst.* ii. p. 19 (1831).

Anas larvata, *Cuv. MS. Mus. Paris* (Cape); *Less. Tr. d'Orn.* p. 634, n. 72 (1831) (descr. nulla); *Pucher. Rev. et Mag. de Zool.* 1850, p. 549 (descr.); *Hartl. J. f. O.* 1855, p. 419; *Bocage, J. f. O.* 1876, p. 294.

Querquedula capensis, *Smith, Cat. S. Afr. Mus.* p. 37, n. 326 (1837); *Eyt. Mon. Anat.* p. 128 (1838); *G. R. Gr. Gen. B.* iii. p. 616, n. 15 (1845); *Eyt. Syn. Anat.* p. 82 (1869); *Bocage, Orn. Ang.* p. 502 (1881); *Salvad. P. Z. S.* 1884, p. 174; *id. Ann. Mus. Civ. Gen.* (2) i. p. 245 (1884); *Sharpe, Layard's B. S. Afr.* p. 758 (1884); *Tristr. Cat. Coll. B.* p. 48 (1889).

Pœcilonetta georgica, *G. R. Gr.* (*nec Gm.*) *List B. Brit. Mus.* iii. p. 134 (Cape of Good Hope) (1844).

Anas assimilis, *Forst. Icon. ined.* t. 75; *id. Descr. Anim.* (*ed. Licht.*) p. 46 (1844); *Schleg. Mus. P.-B.*, Anseres, p. 59 (syn. emend.) (1866); *Gieb. Thes. Orn.* i. p. 344 (syn. emend.) (1872); *Hartl. Vög. Madag.* pp. 364, 365 (1877).

Chaulelasmus strepera, *a.* capensis, *Bp. Compt. Rend.* xliii. p. 650 (1856).

Querquedula larvata, *Bp. Compt. Rend.* xliii. p. 650, n. 99 (syn. emend.) (1856); *Bocage, Jorn. Ac. Sc. Lisb.* 1871, p. 278, 1872, p. 70.

Anas sparsa ?, *Böhm* (*nec Smith*), *J. f. O.* 1885, p. 62.

Adult male. Head, neck, and underparts whitish; head and neck dotted or streaked with black; throat immaculate; feathers of the back and rump and upper tail-coverts edged and barred with fulvous, each feather has one or more brown-black bars and a subterminal spot of the same colour; upper breast with brown bars; remainder of the underparts with obsolete greyish-brown spots, better defined and bar-like on the sides and under tail-coverts; wings dark grey; the greater wing-coverts broadly tipped with white, forming a white bar anteriorly to the glossy green speculum on the secondaries, which are broadly tipped with white and have a subterminal narrow black band bordering the speculum posteriorly; anterior secondaries entirely white; scapulars greyish brown, edged with fulvous; under wing-coverts greyish brown, with pale edges; tail-feathers grey, edged with whitish: bill crimson-red, with the base of the culmen black, and also the base and edge of upper mandible and the base of the lower one; feet ochreous fuscous; irides yellow. Total length about 15·5 inches, wing 8, tail 2·9, culmen 1·6, tarsus 1·6.

Female. Similar to the male.

Hab. Southern Africa, northward to Angola on the West and Shoa on the East.

a. Ad. st.	Cape of Good Hope.	Sir A. Smith [P.].
b. Juv. st.	Cape of Good Hope.	Purchased.
c. Ad. sk.	Cape of Good Hope.	Eyton Coll.
d. ♀ juv. sk.	Walvich Bay, Nov. (*Andersson*).	H. J. Elwes, Esq. [P.].
e. ♂ ad. sk.	Mossamedes, Angola, March (*Anchieta*).	Shelley Coll.
f. ♀ ad. sk.	Rio Coroca, Angola, Jan. (*Anchieta*).	Shelley Coll.

9. Nettion flavirostre.

Pato pico amarillo y negro, *Azara, Apunt.* iii. p. 448, n. 439 (Buenos Ayres) (1805).

Anas flavirostris, *Vieill. N. D.* v. p. 107 (1816) (*ex Azara*) ; *id. Enc. Méth.* i. p. 353 (1823) ; *G. R. Gr. Gen. B.* iii. p. 616, n. 19 (1845) ; *Hartl. Ind. Azar. Apunt.* p. 28, n. 439 (1847) ; *Rchnb. Syn. Av.* t. 90. f. 2343 (1850) ; *Burm. La Plata-Reise*, ii. p. 516 (1861) ; *Schleg. Mus. P.-B.*, Anseres, p. 59 (part.) (1866) ; *Gieb. Thes. Orn.* i. p. 351 (syn. emend.) (1872) ; *B., B., & R. Water-B. N. Am.* ii. p. 2 (note) (1884) ; *Frenz. J. f. O.* 1891, p. 125 (Cordova) ; *Hartert, Kat. Vogelsamml.* p. 231 (1891).

Anas creccoides, *King, Zool. Journ.* iv. p. 99 (Straits of Magellan) (1828).

Sarcelle à bec jaune et noir, *Less. Tr. d'Orn.* p. 634 (Malouines) (1831).

Querquedula creccoides, *Eyt. Mon. Anat.* p. 128 (1838) ; *Fraser, P. Z. S.* 1843, p. 118 (Chili) ; *G. R. Gr. List B. Brit. Mus.* iii. p. 138 (syn. emend.) (1844) ; *id. Gen. B.* iii. p. 616, n. 3 (syn. emend.) (1845) ; *Des Murs in Gay, Hist. de Chile*, i. p. 453 (Chili) (1848) ; *Darwin, Voy. 'Beagle,'* iii. p. 13 (1848) ; *Bp. Compt. Rend.* xliii. p. 650, n. 104 (syn. emend.) (1856) ; *Cass. U.S. Astron. Exped.* ii. p. 203, pl. xxvi. (Chili) (1856) ; *Gould, P. Z. S.* 1859, p. 96 (egg, Falklands) ; *Sclat. P. Z. S.* 1860, p. 389 (Falklands) ; *Abbott, Ibis*, 1861, p. 160 (Falklands) ; *Sclat. P. Z. S.* 1867, p. 335 ; *Phil. & Landb. Cat. Av. Chil.* p. 42 (1868) ; *Eyt. Syn. Anat.* p. 81 (1869) ; *Sclat. P. Z. S.* 1871, p. 700 (Zool. Gard.) ; *Milne-Edw. Rech. Faun. Rég. Austr.* ch. ix. p. 46 (1882) ; *Sclat. List Vert. An.* 8th ed. p. 434 (1883).

Anas azaræ, *Merrem in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 26 (1841).

? Canard innominé femelle, *Less. Descr. Mamm. et Ois.* p. 247 (1847).

Querquedula oxyptera, *Hartl.* (*nec Meyen*) *Naumannia*, 1853, pp. 217, 222 (Rio de Valdivia, Chili) : ? *Bibra, Denkschr. Ak. Wien*, v. p. 131 (Chili) (1853) (*cf. J. f. O.* 1855, p. 57) ; *Licht. Nomencl. Av.* p. 102 (part., Montevideo, nec Peru) (1854) ; ? *Pelz. Reise Novara, Vög.* p. 138 (Chili) (1865) ; *Sharpe, P. Z. S.* 1881, p. 14 (Port Gallant and Cockle Cove) ; *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 314 (1891).

Anas (Dafila) flavirostris, *Burm. J. f. O.* 1860, p. 266 (Mendoza).

Querquedula flavirostris, *Sclat. P. Z. S.* 1867, p. 335 (part.) ; *Sclat. & Salv. P. Z. S.* 1867, pp. 990, 991, 1868, p. 146 (Buenos Ayres) ; *Burm. P. Z. S.* 1872, p. 367 (Argentine) ; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1875) ; *Huds. P. Z. S.* 1874, p. 167 ; *Sclat. & Salv. P. Z. S.* 1876, p. 386 ; *Durnf. Ibis*, 1877, pp. 41 (Chuput), 191 (Buenos Ayres), 1878, pp. 65, 401 (Centr. Patagonia) ; *Sclat. P. Z. S.* 1879, p. 310 (eggs), 1880, p. 522 ; *id. Voy. Challeng., Birds*, p. 150 (1881) ; *White, P. Z. S.* 1883, p. 42 (Cordova) ; *Berl. u. Jher. Zeitschr. ges. Orn.* 1885, p. 175 (Taquara do Mundo Novo, S. Brazil) ; *Berl. J. f. O.* 1887, p. 133 ; *Cab. J. f. O.* 1888, p. 118 ; *Burm. Ann. Mus. Nac. Buen. Air.* iii. p. 247 (1888) ; *Sclat. Argent. Orn.* ii. p. 131 (1889) ; *Tristr. Cat. Coll. B.* p. 49 (1889) ; *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 205 (1891) ; *Holland, Ibis*, 1892, p. 207 (Argentine) ; *Berk. James, New List Chil. B.* p. 9, n. 153 (1892) ; *Aplin, Ibis*, 1894, p. 200 (Uruguay).

Nettion flavirostris, *G. R. Gr. Hand-list*, iii. p. 83, n. 10665 (1871).

Anas (Querquedula) flavirostris, *Rchnw. Orn. Centralbl.* 1882, p. 21 ; *id. Vög. zool. Gärt.* p. 55 (1882).

Adult male. Head and upper part of the neck greyish brown, thickly barred with narrow blackish bands; mantle and anterior scapulars greyish brown, with a black spot near the tip, and margined with rufescent brown; lower back, wings, and upper tail-coverts uniform greyish brown; breast and underparts whitish, the former more or less tinged with reddish, each feather has a subterminal black spot and a blackish bar hidden and almost obsolete; the spots almost evanescent on the abdomen; vent and under tail-coverts whitish grey, unspotted; upper wing-coverts brown-grey, the tips of the greater row hazel, forming a band bordering anteriorly the wing-speculum, which is velvety black, only on the outer web of the inner feathers being glossed with green; tips of the secondaries rufous white, forming a band; tertials and longer scapulars greyish brown, edged with reddish; primaries dusky grey; under wing-coverts brown-grey, but the central ones and the axillaries white; tail brown-grey: "bill wax-yellow, with the culmen and nail black; iris carmine (or wood-brown, *Durnford*); feet grey-blue" (*Philippi*). Total length 15 to 16 inches, wing 8 to 8·25, tail 4·75 to 4·25, culmen 1·4, tarsus 1·12.

Female. Similar, but somewhat duller and smaller.

Young. Duller, and the markings on the head and breast not so distinct, especially on the latter. (*Mus. Turin.*)

Hab. Southern Brazil, Argentine, Chili, Patagonia, and Falklands.

a. ♂ ad. sk.	Chili, March (*Weisshaupt*).	Salvin-Godman Coll.
b. Ad. sk.	Chili (*Reed*).	Salvin-Godman Coll.
c. ♀ juv. sk.	Chili.	H. J. Elwes, Esq. [P.].
d. Imm. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
e. ♂ ad. sk.	Port Gallant, W. coast of Patagonia, Feb.	Dr. Coppinger [C.].
f. Imm. st.	Straits of Magellan.	The Admiralty [P.].
g. ♀ ad. sk.	Cockle Cove, Straits of Magellan, Oct.	Dr. Coppinger [C.].
h. ♀ ad. sk.	St. Martin's Cove, Hermit Is., Oct.	Antarctic Exp. [C.].
i. ♂ ad. sk.	St. Martin's Cove, Hermit Is., Sept.	McCormick Bequest.
k, l. ♂ ♀ ad. sk.	Falkland Is.	Antarctic Exp. [C.].
m. Ad. sk.	S. Salvador Bay, C. Falklands, July.	Antarctic Exp. [C.].
n. ♂ ad. sk.	Conchitas, Buenos Ayres, Nov. (*W. H. Hudson*).	Salvin-Godman Coll.

10. Nettion oxypterum.

Anas oxyptera, *Meyen, Nov. Act.* xvi. *Suppl.* p. 121, t. 26 (Southern Peru) (1833); *Tsch. Arch. f. Naturg.* 1844, i. p. 315.

Querquedula creccoides, part., *G. R. Gr. List B. Brit. Mus.* p. 138 (1844); *id. Gen. B.* iii. p. 616, n. 3 (part.) (1845); *Bp. Compt. Rend.* xliii. p. 650, n. 104 (part.) (1856).

Cyanopterus (?) oxypterus, *Hartl. Verz. Ges. Mus.* p. 119 (Peru) (1844).

Querquedula oxyptera, *Tsch. Faun. Per., Aves*, pp. 55, 309 (Sierra region of Peru) (1844–46); ? *Bibra, Denkschr. Ak. Wien*, v. p. 131 (1853) (Chili); *Licht. Nomencl. Av.* p. 102 (part., Peru) (1854); *Bibra, J. f. O.* 1855, p. 57; *Sclat. & Salv. P. Z. S.* 1867, p. 990 (Salinas, S. Peru), 1868, p. 570, 1869, p. 157 (Peru); *iid. Nomencl. Av. Neotrop.* p. 129 (1873); *Tacz. P. Z. S.* 1874, p. 554 (Junin, Centr. Peru); *Sclat. & Salv. P. Z. S.* 1876, p. 385; *Tacz. P. Z. S.* 1880, p. 212 (Cutervo); *Sclat. P. Z. S.* 1880, p. 522, 1886, p. 401 (Tarapacá); *Tacz. Orn. Pér.* iii. p. 476 (1886); *Tristr. Cat. Coll. B.* p. 49 (1889); *Sclat. P. Z. S.* 1891, p. 136 (Tarapacá); *Berk. James, New List Chil. B.* p. 9, n. 155 (Tarapacá).

Dafila oxyptera, *Rchnb. Syn. Av.*, Natatores, t. 92. f. 164 (*ex Meyen*) (1845).

Querquedula angustirostris, *Ph. & Landb. (nec Ménétr.) An. Univ. Chile*, xxi. p. 439 (1862); *iid. Wiegm. Arch.* 1863, i. p. 202 (Tacna); *Sclat. P. Z. S.* 1867, p. 395 (=oxyptera, *Meyen*); *Philippi, Ornis*, 1888, p. 160 (Calalaste).

Anas flavirostris, part., *Schleg. Mus. P.-B.*, Anseres, p. 59 (1866); *Gieb. Thes. Orn.* i. p. 351 (part.) (1872).

Querquedula flavirostris, *Selat. (nec Vieill.) P. Z. S.* 1867, p. 335.

Nettion oxyptera, *G. R. Gr. Hand-list*, iii. p. 84, n. 10670 (1871).

Adult. Similar to *N. flavirostre*, but larger, with longer bill; interscapular feathers paler, with the central spots less distinct; scapulars more rufescent and with smaller central black marks; dark spots on the lower parts smaller and confined to the breast; abdomen and under tail-coverts pale greyish white, the latter with a slight reddish tinge: bill yellow, culmen and tip black. Total length 17·5 inches, wing 8·7, tail 4, culmen 1·45, tarsus 1·4.

Hab. Cordilleras of Peru and of Northern Chili.

a. ♂ ad. sk.	Tinta, Peru, June.	W. Whitely, Esq. [C.].
b. ♂ ad. sk.	Tinta, Peru, June (*H. Whitely*).	Tweeddale Coll.
c. ♂ ad. sk.	Salinas, S.W. Peru, July (*H. Whitely*).	Salvin-Godman Coll.
d, e. ♂ ♀ ad. sk.	Laguna de Lanjui, Feb. (*H. Whitely*).	H. J. Elwes, Esq. [P.].
f, g. ♂ ♀ ad. sk.	L'ueva negra, Prov. of Tarapacá, Feb.	H. Berkeley James, Esq. [P.].
h–m. ♂ ♀ ad. et juv. sk.	Sacaya, Tarapacá, Jan., Feb.	H. Berkeley James, Esq. [P.].
n. ♀ ad. sk.	Sitani, Tarapacá, Jan.	H. Berkeley James, Esq. [P.].
o. ♀ ad. sk.	Huasco, Tarapacá, Feb.	H. Berkeley James, Esq. [P.].

11. Nettion andium.

Dafila sp., *Sclat. P. Z. S.* 1860, p. 83 (Ecuador).

Querquedula andium, *Sclat. & Salv. Nomencl. Av. Neotrop.* pp. 129, 162 (Ecuador) (1873); *iid. P. Z. S.* 1875, p. 237 (Sierra Nevada of Merida), 1876, p. 387, pl. xxxiv.; *Sclat. P. Z. S.* 1880, p. 522; *Tacz. & Berl. P. Z. S.* 1885, p. 119.

Adult. Similar to *N. flavirostre* and *N. oxypterum*, but darker on

the upper parts, with the interscapular feathers and scapulars less reddish, having the pale edges narrower and more greyish; blackish spots on the breast larger than in *N. oxypterum*, but not so well-defined as in *N. flavirostre*; the upper part of the speculum bronze-green; the principal difference is in the bill, wholly dark, without any yellow; feet flesh-colour. Total length 16 to 17 inches, wing 9, tail 3·5 to 4, culmen 1·66, tarsus 1·5.

Hab. Andes of Ecuador and Venezuela.

a. Ad. sk.	Ecuador, between Rio Bamba and Mocha (*Fraser*).	Sclater Coll. (Type of the species.)
b. Ad. sk.	Sical, Ecuador (*Villagomez*).	Salvin-Godman Coll.
c, *d*. Ad. et imm. sk.	Rio Blanco, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
e, *f*. Ad. sk.	Ecuador.	Salvin-Godman Coll.
g. ♂ juv. sk.	Sierra Nevada of Merida, Venezuela (*A. Goering*).	Salvin-Godman Coll.

12. Nettion georgicum.

Georgia Duck, *Lath. Syn.* iii. 2, p. 478, n. 34 (1785) (Georgia Australi Americæ) (*ex Sir Joseph Banks's drawings*).

Anas georgica, *Gm. S. N.* i. 2, p. 516, n. 77 (1788); *Lath. Ind. Orn.* ii. p. 847, n. 41 (1790); *Bonn. Enc. Méth.* i. p. 148 (1791); *Vieill. N. D.* v. p. 118 (1816); *Dum. Dict. Sc. Nat.* vi. p. 381 (1817); *G. R. Gr. Gen. B.* iii. p. 616, n. 8 (1845) (=xanthorhyncha, *Forst. Ic.* 71); *id. Hand-list*, iii. p. 82, n. 10652 (1871).

Tadorna georgica, *Steph. Gen. Zool.* xii. 2, p. 76 (1824).

Anas xanthorhyncha, *Forst. Icon. ined.* t. 71 (nec t. 72); *id. Descr. An.* (*ed. Licht.*) p. 342, n. 257 (nec p. 45) (1844) (Georgia Australi); *Licht. ibid.* note (=Anas oxyptera, *Licht.* (*nec Meyen*), which is =A. flavirostris, *Vieill.*), *cf. Nomencl. Av.* p. 102 (Montevideo).

Querquedula xanthorhyncha ?, *Bp. Compt. Rend.* xliii. p. 650 (1856).

Anas obscura, part., *Bp. Compt. Rend.* xliii. p. 650, n. 72 (1856).

Querquedula eatoni, *Cab.* (*nec Sharpe*) *J. f. O.* 1884, p. 254 (S. Georgia); *Pagenst. Jahrb. d. Hamburg. Wissensch. Anst.* ii. p. 8, n. 4 (part.), p. 13 (1885); *v. d. Steinen, Intern. Polarforsch.* 1882–83, *Deutsch. Exped.* ii. p. 273 (1890).

Querquedula antarctica, *Cab. J. f. O.* 1888, p. 118, t. 1 (S. Georgia); *Schal. J. f. O.* 1891, p. 18.

Very similar to *N. flavirostre*, but the speculum entirely black, with no longitudinal metallic-green band on the upper part.

I have had no opportunity of examining a specimen of this Teal, but, judging from Cabanis's plate and short description, it appears that it belongs to the group containing *N. flavirostre*, *N. oxypterum*, and *N. andium*, and differs from all in wanting the green band on the speculum. I have compared Cabanis's plate with Forster's Icon. ined. no. 71, and I believe them to represent the same bird. I have been informed by Dr. Reichenow that the bill of the original bird in the Berlin Museum figured by Cabanis is not black, as in the plate, but has only the culmen black, while the sides are greenish, and there is a small yellowish spot under the nares.

Hab. Southern Georgia.

13. Nettion punctatum.

Anas punctata, *Burch. Travels*, i. p. 283 (note) (1822); *G. R. Gr. Gen. B.* iii. p. 616, n. 21 (1845); *Newt. P. Z. S.* 1871, p. 649 (note).

Querquedula hottentota, *Smith, Cat. S. Afr. Mus.* p. 37, n. 327 (1837) (descr. nulla); *Eyt. Mon. Anat.* p. 129 (Orange River) (1838); *Smith, Ill. S. Afr. Zool., Aves*, pl. 105 (1845); *G. R. Gr. Gen. B.* iii. p. 616, n. 8 (1845); *Bp. Compt. Rend.* xliii. p. 650, n. 101 (1856); *Gurn. Ibis*, 1862, p. 154 (Natal); *Layard, B. of S. Afr.* p. 353 (1867); *Boc. Jorn. Acad. Sc. Lisb.* 1867, p. 329; *Gurn. Ibis*, 1868, pp. 262, 471; *Chapm. Travels in S. Afr.* ii. App. p. 442 (1868); *Grand. Rev. et Mag. de Zool.* 1868, p. 5 (Madagascar); *Eyt. Syn. Anat.* p. 83 (1869); *Newt. P. Z. S.* 1871, p. 649 (note); *Boc. Jorn. Acad. Sc. Lisboa*, 1872, p. 70; *Bartl. P. Z. S.* 1875, p. 69 (Tamatave, Madagascar); *Boc. & Gad. J. f. O.* 1876, p. 294; *Hartl. Vög. Madag.* p. 365 (1877); *Ayres, Ibis*, 1880, p. 273 (Transvaal); *Boc. Orn. Ang.* p. 503 (Mossamedes, Rio Coroca) (1881); *Butl., Feild., & Reid, Zoolog.* 1882, p. 427 (Natal); *Milne-Edw. & Grand. Ois. Madag.* p. 723, pl. 275 *a*. f. 3 (head) (1882); *Sharpe, Layard's B. S. Afr.* p. 757 (1884); *Dubois, Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 194 (1880) (Tanganyika); *Tristr. Cat. Coll. B.* p. 270 (Natal) (1889); *Sibree, Ibis*, 1892, p. 271 (Madagascar); *Shell. Ibis*, 1894, pp. 28, 478 (Lake Shirwa).

Anas pileata, *Licht. Verz. Säugeth. u. Vög.* p. 20, nn. 244, 245 (Kaffernl.) (1842); *G. R. Gr. Gen. B.* App. p. 28 (1849); *Gieb. Thes. Orn.* i. p. 360 (1872); *Böhm, J. f. O.* 1885, p. 67 (Karema, Tanganyika).

Pterocyanea pileata, *Licht. Nomencl. Av.* p. 102 (1854).

Anas hottentota, *Schleg. Mus. P.-B.*, Anseres, p. 60 (Umias, S. Afr.) (1866); *Gieb. Thes. Orn.* i. p. 354 (1872); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 26 (1894).

Querquedula madagascariensis, *Grand. Rev. et Mag. de Zool.* 1867, pp. 87 (Madagascar), 255 (=Q. hottentota).

Nettion hottentota, *G. R. Gr. Hand-list*, iii. p. 83, no. 10662 (1871); *Anderss. B. Damara Land*, p. 340 (Damara and Great Namaqua Land) (1872).

Anas assimilis, *Mus. Paris., fide Oustalet* (*cf. Hartl. Vög. Madag.* p. 365, 1877).

Querquedula punctata, *Sclat. P. Z. S.* 1880, pp. 522, 534 (S. Africa); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 322 (Shoa) (1888); *Tristr. Cat. Coll. B.* p. 49 (Transvaal) (1889).

Querquedula pileata, *Schalow, J. f. O.* 1884, p. 177; *Matschie, J. f. O.* 1887, p. 137.

Querquedula cyanorhyncha, *Böhm, MS., fide Schalow, J. f. O.* 1884, p. 177 (=pileata, *Licht.*).

Adult male. Upper part of the head, including the eyes, black, sharply defined from the buffish-white lower half and throat; the white of the cheeks extending backward in a broad band towards the occiput; sides of the neck whitish, thickly mottled with black; back black, each feather edged with light brown; lower back and rump black, glossed with green; upper and under tail-coverts pale brown, thickly undulated with narrow black lines; lower parts

light brown, the feathers of the lower fore neck, breast, and sides with large subapical black spots; lower breast and abdomen undulated with blackish bars; wings brassy green; a glossy green speculum on the secondaries, which are broadly tipped with white and have a black subterminal band bordering posteriorly the speculum; longer scapulars brassy green, with a light brown stripe along the middle; under wing-coverts blackish brown, the median and the greater ones, like the axillaries, white; tail-feathers dark brown, edged with pale brown: "bill dark lead-colour; feet dark brown; irides brown" (*Antinori*); but according to Andersson, "iris reddish yellow; bill bluish red except at the base, where it is black; legs purplish yellow." Total length about 13 inches, wing 6·2, tail 2·5, culmen 1·45, tarsus 1.

Female. Similar to the male, but somewhat duller, and the markings less distinct.

Young. Differs from the adult birds in having the breast as well as the abdomen pale fawn-colour, with no distinct spots or obsolete ones and no transverse dusky bars; the under tail-coverts are reddish fawn-colour and unspotted.

Hab. Southern Africa and Madagascar, north to Angola on the West and Shoa on the East.

a. ♀ imm. sk.	Damara-land.	Purchased.
b. ?♂ juv. sk.	Omanbondé, Damara-land (*Andersson*).	H. J. Elwes, Esq. [P.].
c, d. ♂ ♀ ad. sk.	S. Africa. (Types of *Querquedula hottentota*, Smith.)	Sir A. Smith [P.].
e–i. ♂ ♀ ad. sk.	Natal.	Tweeddale Coll.
k. ♂ ad. sk.	Newcastle, Natal, Dec.	Shelley Coll.
l. ♂ ad. sk.	Potchefstroom, Nov. (*T. Ayres*).	J. H. Gurney, Esq. [P.].
m. ♂ ad. sk.	Transvaal.	R. B. Sharpe, Esq. [P.].
n–t. ♂ ♀ ad. et juv. sk.	Lake Shirwa, Nyassa-land, May, August (*A. Whyte*).	Sir H. H. Johnston, C.B. [P.].

14. Nettion brasiliense.

? Mareca, alia species, *Maregr. Hist. Br.* p. 214 (♀).
Anas brasiliensis, *Briss. Orn.* vi. p. 360 (1760) (*ex Maregrav*).
Maréca, *Buff. Hist. Nat. Ois.* ix. p. 256 (1783).
Mareca Duck, *Lath. Syn.* iii. 2, p. 508, n. 54 (1785).
Anas brasiliensis, *Gm. S. N.* i. 2, p. 517, n. 78 (1788); *Lath. Ind. Orn.* ii. p. 856, n. 59 (1790); *Vieill. N. D.* v. p. 125 (1816); *Licht. Abh. k. Ak. Wissensch. Berl.* 1816–17, p. 172; *Dum. Dict. Sc. Nat.* vi. p. 380 (1817); *Wied, Reise nach Bras.* i. pp. 112, 163 (1820); *Less. Tr. d'Orn.* p. 634 (1831); *Wied, Beitr.* iv. p. 933 (1832); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Cab. in Schomb. Guiana*, iii. p. 762 (Guiana) (1848); *Burm. Syst. Uebers. Th. Bras.* iii. p. 439 (1856); *id. J. f. O.* 1860, p. 267 (Paraná and Tucuman); *id. La Plata-Reise*, ii. p. 517 (Tucuman) (1861); *Schleg. Mus. P.-B.*, Anseres, p. 61 (1866); *Euler, J. f. O.* 1867, pp. 189 197, 198; *Reinh. Fugl. Bras. Camp.* p. 21 (int. Brazil)

(1870); *Gieb. Thes. Orn.* i. p. 346 (1872); *Frenz. J. f. O.* 1891, p. 125 (Cordoba); *Hartert, Kat. Vogelsamml.* p. 231 (1891).

Anas mareca, *Bonn. Enc. Méth.* i. p. 152, n. 67 (1791).

Pato ipecutiri, *Azar. Apunt.* iii. p. 445, n. 437 (Paraguay) (1805).

Anas ipecutiri, *Vieill. N. D.* v. p. 120 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 354 (1823).

Mareca brasiliensis, *Steph. Gen. Zool.* xii. 2, p. 138 (1824); *G. R. Gr. Gen. B.* iii. p. 614, n. 7 (1845).

Anas paturi, *Spix, Av. Bras.* ii. p. 85, t. 109 (Rio S. Francisco) (1825).

Anas notata, *Illig. in Mus. Berol., fide Wied, Beitr.* iv. p. 634 (1832).

Querquedula erythrorhyncha, "*Spix*," *Eyt.* (*nec Gm.*) *Mon. Anat.* p. 127 (1838); *Darw. Voy. 'Beagle,'* iii. p. 135 (Buenos Ayres and Straits of Magellan) (1841); *Eyt. Syn. Anat.* p. 79 (1869); *Burm. Ann. Mus. Nac. Buen. Air.* iii. p. 267 (1888).

Querquedula ipecutiri, *G. R. Gr. List B. Brit. Mus.* iii. p. 139 (British Guiana) (1844); *Hartl. Ind. Azar. Apunt.* p. 28, n. 437 (1847); *Des Murs in Gay, Hist. de Chile*, i. p. 451 (1848); *Sclat. P. Z. S.* 1864, p. 138 (Pará, Zool. Gard.); *Phil. & Landb. Cat. Av. Chil.* p. 42 (1868).

Querquedula ipecuturi, *G. R. Gr. Gen. B.* iii. p. 616, n. 9 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. f. 179 (1845) (*ex Spix*).

Querquedula novæ hispaniæ, *Rchnb.* (*nec Gm.*) *Syn. Av.*, Natatores, t. 110. ff. 981–82 (1845).

Querquedula brasiliensis, *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 106 (1856); *Sclat. & Salv. P. Z. S.* 1869, p. 635 (Buenos Ayres); *Pelz. Orn. Bras.* pp. 320, 460, lix (Rio Branco, S. Paulo and Matogrosso) (1870); *Burm. P. Z. S.* 1872, p. 368; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Sclat. P. Z. S.* 1873, p. 809 (Zool. Gard.); *Cab. J. f. O.* 1874, p. 231; *Sclat. & Salv. P. Z. S.* 1876, p. 390 (Bolivia, *Pearce*); *Durnf. Ibis*, 1877, p. 192, 1878, p. 64; *Sclat. P. Z. S.* 1880, p. 532; *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); *Sclat. List Vert. An.* 8th ed. p. 433 (1883); *Barrows, Auk*, 1884, p. 273 (Entrerios); *Berl. u. Ihering, Zeitschr. ges. Orn.* 1885, p. 176 (Taquara); *Berl. J. f. O.* 1887, p. 124; *Tristr. Cat. Coll. B.* p. 48 (1889); *Sclat. Argent. Orn.* ii. p. 133 (1889); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 312 (1891); *Kerr, Ibis*, 1892, p. 146 (Lower Pilcomayo); *Aplin, Ibis*, 1894, p. 201 (Uruguay).

Nettion brasiliensis, *G. R. Gr. Hand-list*, iii. p. 84, no. 10667 (1871).

Anas (Querquedula) brasiliensis, *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 55 (1882).

Hybrids.

Anas brasiliensis × A. castanea, *Suchetet*; *Leverk. J. f. O.* 1890, p. 229.

Adult male. Upper parts olive-brown, the feathers of the back darker in the centre; forehead, anterior part of the cheek, and throat brown; top of the head, occiput, and upper part of the nape black, the latter with a green gloss; sides of the head, posteriorly, and upper part of the sides of the neck dull greyish: lower part of the neck and breast reddish, changing into greyish on the abdomen and under tail-coverts; the breast and abdomen with brown

obsolete spots or bars; round the middle of the neck some small black spots; some round black spots on the sides; rump velvety black; upper tail-coverts greyish olive; under tail-coverts undulated with some irregular dark cross lines, the tip of the larger ones black; upper wing-coverts velvety black, but the greater row like the secondaries glossy green, more or less with a purple gloss, especially towards the innermost of the latter, which have the apical half snowy white; between the green and the white portions a black velvety band; tertials like the scapulars olive-brown; primaries black, the inner ones glossed with green on the outer webs; under wing-coverts black, with a green lustre; axillaries white; tail black: "iris brown; above dark greyish red, brighter on the edges; under mandible pale red; feet cinnabar-red" (*Wied*). Total length 17 inches, wing 8·15, tail 3·9, culmen 1·75, tarsus 1·25.

Female. Similar to the male, but somewhat duller; the top of the head and the nape brown; a whitish spot just a little over and before the eyes, and a second one at the base of the bill above the gape; no black spots round the middle of the neck; bill dark brown.

Hab. South America, from New Granada and Guiana to Magellan Straits.

a. Ad. sk.	Vicinity of Bogota, New Granada (*G. Crowther*).	Salvin-Godman Coll.
b, c. ♂ ad. et juv. st.	British Guiana.	Sir R. Schomburgk [P.].
d, e. ♂ ♀ ad. sk.	Aunai, Brit. Guiana, June (*H. Whitely*).	Salvin-Godman Coll.
f. Ad. sk.	Brazil.	M. Claussen [C.].
g–i. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Pelotas, Rio Grande do Sul, Brazil (*Joyner*).	Salvin-Godman Coll.
l. Ad. sk.	Salinas, Bolivia, May (*R. Pearce*).	Salvin-Godman Coll.
m. Ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
n. ♂ ad. sk.	Buenos Ayres, June.	H. Durnford, Esq. [P.].
o, p. ♂ ♀ ad. sk.	Buenos Ayres.	Alan Peel, Esq. [P.].
q. Ad. st.		Zool. Soc.

15. Nettion torquatum.

Pato collar negro, *Azara, Apunt.* iii. p. 452, n. 441 (♂) (Paraguay) (1805).

Pato ceja blanca, *Azara, ibid.* p. 453, n. 442 (♀) (1805).

Anas torquata, *Vieill.* (*nec Briss. neque Gm.*) *N. D.* v. p. 110 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 355 (1823); *Schleg. Mus. P.-B.*, Anseres, p. 61 (Brazil! Chili! San Domingo!) (1866); *Gieb. Thes. Orn.* i. p. 364 (1872).

Anas leucophrys, *Vieill. N. D.* v. p. 156 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 355 (1823); *G. R. Gr. Gen. B.* iii. p. 616, n. 20 (1845); *Hartl. Ind. Azar. Apunt.* p. 28, n. 442 (1847).

Querquedula manillensis, *Eyt.* (*nec Gm.*) *Mon. Anat.* p. 125 (1838) (type examined) *; *id. Syn. Anat.* p. 78 (1869).
Anas rubidoptera, *Dub. Orn. Gal.* p. 90, pl. lvii. (♂ and ♀) (1839); *G. R. Gr. Gen. B.* iii. p. 616, n. 23 (1845).
Anas rhodopus, *Merrem in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 45 (1841).
Querquedula torquata, *G. R. Gr. List B. Brit. Mus.* iii. p. 139 (1844); *id. Gen. B.* iii. p. 616, n. 12 (1845); *Hartl. Ind. Azar. Apunt.* p. 28, n. 441 (1847); *Bp. Compt. Rend.* xliii. p. 650, n. 105 (1856); *Sclat. P. Z. S.* 1867, p. 335 (Chili!); *Sclat. & Salv. P. Z. S.* 1869, p. 635 (Argentine); *Pelz. Orn. Bras.* p. 460 (1870); *Burm. P. Z. S.* 1872, p. 367 (Paraná); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (Argentine) (1873); *Sclat. & Salv. P. Z. S.* 1876, p. 389; *Sclat. P. Z. S.* 1880, p. 522; *Berl. J. f. O.* 1887, p. 124; *Sclat. Argent. Orn.* ii. p. 132 (1889); *Aplin, Ibis,* 1894, p. 201 (Uruguay).
Anas rhodoptera, *Dub.* (*errore*), *Bp. Compt. Rend.* xliii. p. 650 (in syn. sp. 105) (1856).
? Querquedula leucophrys, *Bp. l. c.* n. 107 (1856).
Nettion torquata, *G. R. Gr. Hand-list,* iii. p. 83, n. 10666 (1871).

Adult male. Crown and hind neck black, expanded below into a half-collar; forehead dull grey, streaked with black; cheeks, throat, and sides of the neck dull whitish grey, with dusky streaks on the former; back greyish olive; lower back, rump, and upper tail-coverts deep black; breast rosy red, each feather with a roundish subapical black spot; abdomen whitish, obsoletely barred with grey; flanks pure grey, waved with narrow black lines; under tail-coverts black, with a white blotch on each side at the base; scapulars chestnut-red; upper wing-coverts glossy black, with a white patch on the anterior secondary-coverts; secondaries bronzy green on the outer web, forming the speculum; tertiaries olive-brown, primaries blackish brown; under wing-coverts black, the greater ones brown-black; tail black; bill black (?); feet yellow. Total length 14 inches, wing 7·2, tail 2·5, culmen 1·48, tarsus 1·08.

Female. Brown; superciliary stripe, middle of the cheeks, throat, and sides of the upper neck white; back and scapulars olive-brown; rump and upper tail-coverts black; beneath dull whitish, with broad subapical pale brown bands, better defined on the flanks; abdomen and under tail-coverts whitish, the latter powdered with dusky; wings as in the male; tail brown: bill reddish brown; feet brown (or yellow?).

Hab. Paraguay, Uruguay, and Argentine; wrongly stated to inhabit Chili, Brazil, and San Domingo (*Schlegel*).

a. ♂ ad. st.	S. America.	Old Coll.
b. ♂ ad. sk.	Buenos Ayres (*W. H. Hudson*).	Salvin-Godman Coll.
c. ♀ ad. st.	Probably Bolivia (*Bridges*).	Cuming Coll.

* Dr. H. O. Forbes has been so kind as to let me examine one of the types of Eyton's description, preserved in the Liverpool Museum.

32. DAFILA.

Type.

Dafila, *Leach, in Brit. Mus.*; *Steph. Gen. Zool.* xii. 2, p. 126 (1824) ..... D. acuta.
Trachelonetta, *Kaup, Natürl. Syst.* p. 115 (1829) ..... D. acuta.
Phasianurus, *Wagl. Isis*, 1832, p. 1225 ..... D. acuta.
Daphila (!), *Sw., fide Coues, Birds N.-West*, p. 562 (1874); *Gieb. Thes. Orn.* ii. p. 14 (1875).

Range. Cosmopolitan, except Australia and New Zealand, but one species has been found in the Phœnix Group.

Key to the Species.

a. Tail-feathers not barred across.
  a'. Central tail-feathers black, lateral ones grey, with paler or whitish margins; head dark brown; a narrow band at the tip of the last row of wing-coverts cinnamon.
    a''. Larger: culmen 1·85–2·15 inches: anterior part and sides of neck, breast, and middle of the abdomen white.... *acuta* ♂, p. 270.
    b''. Smaller: culmen 1·35 inch: anterior part and sides of neck, breast, and abdomen dull greyish; the breast with narrow brown streaks..... *eatoni* ♂, p. 278.
  b'. Central tail-feathers dark brown, a little darker than the lateral ones; head rufescent on the upper part, whitish on the lower part, thickly dotted with blackish; band at the tip of the last row of the wing-coverts, like the one at the tip of the secondaries, buff..... *spinicauda* ♂ ♀, p. 279.
b. Tail-feathers blackish, barred across with whitish or rufescent.
  c'. Larger: culmen 1·85 inch ..... *acuta* ♀, p. 270.
  d'. Smaller: culmen 1·35 inch ..... *eatoni* ♀, p. 278.

1. Dafila acuta.

The Pintail.

Anas longicauda, *Briss. Orn.* vi. p. 369, pl. 34. ff. 1 (♂), 2 (♀) (1760); *Brehm, Isis*, 1830, p. 997, n. 2; *id. Naturg. Vög. Deutschl.* p. 868 (1831).

Anas acuta, *Linn. S. N.* i. p. 202, n. 28 (1766); *Gm. S. N.* i. 2, p. 528, n. 28 (1788); *Lath. Ind. Orn.* ii. p. 864, n. 81 (1790); *Bonn. Enc. Méth.* i. p. 137, pl. 38. f. 3 (1790); *Lath. Tr. Linn. Soc.* iv. p. 110, pl. xiii. f. 6 (trachea) (1798); *Wils. Am. Orn.* viii. p. 72, pl. 63. f. 3 (1814); *Temm. Man. d'Orn.* p. 540 (1815); *Vieill. N. D.* v. p. 133 (1816); *Dum. Dict. Sc. Nat.* vi. p. 369 (1817); *Temm. Man.* 2nd ed. ii. p. 838 (1820); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 84 (1823) (Egypt, Nubia); *Bp. Obs. Wils.* n. 528 (1825); *id. Syn.* p. 383, n. 325 (1828); *Less. Man. d'Orn.* ii. p. 417 (1828); *Flem. Brit. An.* p. 124 (1828); *Less. Tr. d'Orn.* p. 634 (1831); *Brehm, Naturg. Vög. Deutschl.* p. 866 (1831); *Wagl. Isis*, 1831, p. 532 (Mexico) (= Anas tzitzihoa,

Vieill.); *Savi, Orn. Tosc.* iii. p. 156 (1831); *Ménétr. Cat. Rais. Cauc.* p. 57 (Caspian) (1832); *Aud. Orn. Biogr.* iii. p. 214 (1835); *Nordm. in Ermann's Verz. Th. Pfl.* p. 18 (1835); *Aud. Orn. Biogr.* v. p. 615, pl. 227 (1839); *id. Syn.* p. 279 (1839); *Vig. Zool. Beechey's Voy., Orn.* p. 31 (1839); *Temm. Man.* 2nd ed. iv. p. 532 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxv, 227 (1840); *Naum. Vög. Deutschl.* xi. p. 638, Taf. 301 (1842); *Selys-Longch. Faun. Belg.* i. p. 142 (1842); *Aud. B. Am.* vi. p. 266, pl. 390 (1843); *Giraud, B. Long Isl.* p. 310 (1844); *DeKay, N. Y. Zool.* ii. p. 341 (1844); *Schleg. Rev. Crit.* p. 115 (1844); *Holboll, Faun. Groenl.* p. 64 (1846); *Degl. Orn. Eur.* ii. p. 430 (1849); *Lemb. Av. Cub.* p. 113 (1850); *Temm. & Schleg. Faun. Jap., Aves,* p. 128 (1850); *Midd. Sib. Reis.* p. 233 (1853); *Wallengr. Naumannia,* 1854, p. 271 (Scandinavia); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (Ceylon) (1854); *Adams, P. Z. S.* 1858, p. 510; *Kittl. Denkw.* ii. pp. 292, 343, 366 (1858); *Wied, J. f. O.* 1859, p. 169; *Martens, ibid.* p. 220 (Bermudas); *Finsch, ibid.* p. 386 (Bulgaria); *Swinh. P. Z. S.* 1863, p. 324 (China); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *Schleg. Mus. P.-B.,* Anseres, p. 37 (Senegal!, Brazil, *Burmeister*!) (1866); *Przew. Putesch. Ussuri,* n. 204 (1867–69); *David, N. Arch. du Mus., Bull.* vii., *Cat.* no. 448 (1871); *Finsch, Abh. Ver. Brem.* iii. p. 66 (Alaska) (1872); *Gieb. Thes. Orn.* i. p. 343 (1872); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Blyth, B. Burma,* p. 166 (Arakan) (1875); *Adams, Ibis,* 1878, p. 431 (Alaska); *Finsch, Verh. z.-b. Ges. Wien,* 1879, p. 262; *Legge, B. of Ceyl.* p. 1076 (1880); *Scully, Ibis,* 1881, p. 593; *Rehnw. J. f. O.* 1890, p. 82; *Seeb. B. Japan. Emp.* p. 246 (1890); *Brandt, J. f. O.* 1891, p. 267 (Aleutian I.).

Anas subulata, *S. G. Gm. Reise Russl.* i. p. 13, t. 1 (♀) (1771).

Pin-tail, *Penn. Brit. Zool.* ii. n. 282 (1776); *Lath. Syn.* iii. 2, p. 326, n. 72 (1785).

Anatra di coda lunga, *Gerini, Stor. degli Uce.* v. t. 581 (♂) (1776).

Canard à longue queue, *D'Aubent. Pl. Enl.* 954 (17—?).

Pilet, *Buff. Hist. Nat. Ois.* ix. p. 199, pl. 13 (1783).

Anas alandica, *Sparrm. Mus. Carls.* fasc. iii. t. 60 (1786).

Anas acuta β, *Gm. S. N.* i. 2, p. 528 (1788) (*ex Beseke, Schr. der Berl. naturf. Ges.* vii. p. 459).

Anas sparrmanni, *Lath. Ind. Orn.* ii. p. 876, n. 110 (1790) (*ex Sparrman*); *Vieill. N. D.* v. p. 157 (1816).

Anas caudacuta, *Pall. Zoogr. Rosso-As.* ii. p. 280 (1811); *Leach, Cat. M. & B. Brit. Mus.* p. 38 (1816).

Anas tzitzihoa, *Vieill. N. D.* v. p. 163 (1816) (Mexico, *ex Hernandez*).

Dafila caudacuta, *Steph. Gen. Zool.* xii. 2, p. 127, pl. 49 (1824); *Jard. Br. Birds,* iv. p. 120 (1837?); *Sw. Class. B.* ii. p. 367 (1837); *Gould, B. of Eur.* pl. 365 (1837); *Eyt. Mon. Anat.* p. 113 (1838); *Fraser, P. Z. S.* 1839, p. 134 (Erzeroom); *Jerd. Madr. Journ.* xii. p. 220, n. 385 (1840); *Denny, P. Z. S.* 1847, p. 40; *Orde, Ibis,* 1859, p. 469 (N. Uist); *Parker, P. Z. S.* 1863, p. 517 (sacral vertebræ); *Eyt. Syn. Anat.* p. 73 (1869).

Trachelonetta acuta, *Kaup, Natürl. Syst.* p. 115 (1829).

Anas caudata, *Brehm, Isis,* 1830, p. 997, n. 3; *id. Naturg. Vög. Deutschl.* p. 869 (1831).

Anas (Dafila) caudacuta, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 441 (1831).

Phasianurus acutus, *Wagl. Isis,* 1832, p. 1235.

Querquedula acuta, *Selby, Ill. Brit. Orn.* ii. p. 311, pl. 59 (♂), pl. 60.

f. 2 (♀) (1833); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gulliv. P. Z. S.* 1875, p. 488.

Anas (Boschas) acuta, *Nutt. Man.* ii. p. 386 (1834).

Anas (Dafila) acuta, *Jenyns, Man.* p. 232 (1835).

Dafila acuta, *Eyt. Cat. Br. B.* p. 60 (1836); *Bp. Comp. List*, p. 56 (1838); *Blyth, P. Z. S.* 1842, pp. 93, 94; *Hartl. Verz. Ges. Mus.* p. 119 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 134 (Jamaica) (1844); *id. Gen. B.* iii. p. 615, n. 1 (1845); *id. Cat. Hodgs. Coll. B. M.* p. 145 (Nepal) (1846); *Rchnb. Syn. Av.*, Natatores, t. 88. ff. 221–23 (1845); *Rüpp. Syst. Ueb.* p. 138 (1845); *Gosse, B. Jam.* p. 408 (1847); *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1775 (1849); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Baird, Stansb. Rep.* p. 323 (1852); *Woodh. Sitgr. Rep.* p. 103 (New Mexico and California) (1853); *Licht. Nomencl. Av.* p. 102 (Arabia) (1854); *Bp. Compt. Rend.* xxxvii. p. 664 (1854); *id. Compt. Rend.* xliii. p. 650, n. 112 (1856); *Newb. P. R. R. Rep.* vi. p. 102 (California, Oregon) (1857); *Sclat. P. Z. S.* 1857, p. 206 (Jalapa); *Cab. & Gundl. J. f. O.* 1857, p. 227 (Cuba); *Cass. Exp. Am. Squadr. China Seas and Japan*, ii. p. 231 (1851); *id. U.S. Expl. Exp., Mamm. & Orn.* p. 341 (1858); *Baird, B. N. Am.* p. 776 (1858); *id. Cat. N. Am. B.* n. 578 (1859); *Heerm. P. R. R. Rep.* x. pt. vi. p. 69 (California) (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 229; *Adams, P. Z. S.* 1859, p. 190; *Sclat. & Salv. Ibis*, 1859, p. 231 (Guatemala); *Coop. & Suckl. N. H. Wash. Terr.* p. 252 (1860); *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *Irby, Ibis*, 1861, p. 250 (Oudh); *Swinh. Ibis*, 1861, p. 345 (N. China); *Albrecht, J. f. O.* 1862, p. 207 (Jamaica); *Hayd. Rep.* 1862, p. 175 (Nebraska); *Blak. Ibis*, 1862, p. 332; *Ross, Canad. Nat.*, vii. p. 152 (1862); *id. Nat. Hist. Rev.* (2) ii. p. 287 (1862); *Verrill, Pr. Ess. Inst.* iii. p. 158 (1862); *G. R. Gr. List Br. B.* p. 192 (1863); *id. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Swinh. Ibis*, 1863, p. 434 (Formosa); *Lawr. Ann. Lyc. N. Y.* viii. p. 13 (Panama) (1863); *Jerd. B. of Ind.* iii. p. 803 (1864); *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica); *More, Ibis*, 1865, p. 443 (Great Britain); *Dress. Ibis*, 1866, p. 43 (Texas); *Gundl. Repert. Fis.-Nat.* i. p. 388 (Cuba) (1866); *Coues, Pr. Ac. Philad.* 1866, p. 98 (Arizona); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1867); *Whitely, Ibis*, 1867, p. 207; *Swinh. Ibis*, 1867, p. 399 (Amoy); *Degl. & Gerbe, Orn. Eur.* ii. p. 515 (1867); *Coues, Pr. Ess. Inst.* v. p. 298 (1868); *Lawr. Ann. Lyc. N. Y.* ix. p. 143 (Costa Rica) (1868); *Frantz. J. f. O.* 1869, p. 378 (Costa Rica); *Dall & Bann. Tr. Chic. Ac.* i. p. 297 (Alaska, breeding) (1869); *Gould, B. Gr. Brit.* v. pl. 18 (pt. xv., 1869); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *Swinh. P. Z. S.* 1871, p. 418 (Formosa); *G. R. Gr. Hand-list*, iii. p. 81, n. 10632 (1871); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Shell. B. of Egypt*, p. 284 (1872); *Allen, Bull. Mus. C. Z.* iii. p. 183 (Utah) (1872); *Aiken, Pr. Bost. Soc.* xv. p. 210 (Colorado) (1872); *Trippe, ibid.* p. 241 (Java) (1872); *Merr. U.S. Geol. Surv. Terr.* 1872, p. 703 (Wyoming); *Coues, Key*, p. 286, f. 186 (1872); *id. Check-list*, n. 490 (1873); *Dress. B. Eur.* vi. p. 531, pls. 430, 431 (pts. 19, 20, 1873); *Hume, Str. Feath.* i. p. 261 (India) (1873); *Snow, B. Kans.* p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1311 (1873); *Dyb. J. f. O.* 1873, p. 109, 1874, p. 337; *Coues, Birds N.-West*, p. 561 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 314 (Mexico) (1874);

Hume, Str. F. iii. p. 193 (Pegu) (1875); *Gundl. J. f. O.* 1875, p. 378 (Cuba); *Dress. Ibis*, 1876, p. 420; *Sclat. & Salv. P. Z. S.* 1876, p. 391; *Blanf. East. Persia*, ii. p. 301 (1876); *Butl. Str. Feath.* iv. p. 29 (1876); *Scully, ibid.* p. 200 (E. Turkestan) (1876); *Sharpe, Ibis*, 1877, p. 24 (Borneo); *Swinh. ibid.* p. 147; *Tacz. Orn. Faun. Vost. Sibir.* p. 69 (1877); *id. Bull. Soc. Zool. Fr.* 1877, p. 45; *David et Oust. Ois. Chine*, p. 498 (1877); *Gundl. An. Soc. Esp. Hist. Nat.* vii. p. 442 (Porto Rico) (1878); *Hume & Davis. Str. Feath.* vi. p. 489 (1878); *Prjev. in Rowley's Orn. Misc.* iii. p. 101 (Mongolia) (1878); *Blakist. & Pryer, Ibis*, 1878, p. 213; *Seeb. Ibis*, 1879, p. 22; *Hume, Str. Feath.* viii. p. 115, n. 962 (India) (1879); *Scully, ibid.* p. 362 (Nepal) (1879); *R. Gray, Pr. Phys. Soc. Edinb.* 1880, p. 361 (Outer Hebrides); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 184 (1880); *Schmidt, P. Z. S.* 1880, p. 318; *Sclat. P. Z. S.* 1880, p. 515; *Hume & Marsh. Game B. of Ind.* iii. p. 189, pl. 25 (1880); *Bidd. Ibis*, 1881, p. 100 (Gilgit); *Ridgw. Nom. N. Am. B.* n. 605 (1881); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 97 (1882); *Coues, Check-list*, 2nd ed. p. 113, n. 710 (1882); *Salv. Cat. B. Strickl. Coll.* p. 533 (1882); *Oates, Str. Feath.* x. p. 245 (1882); *id. Birds Br. Burm.* ii. p. 278 (1883); *B. O. U. List Br. B.* p. 124 (1883); *Sclat. List Vert. An.* 8th ed. p. 434 (1883); *Tacz. Bull. Soc. Zool. Fr.* 1883, p. 343; *Nels. Cruise 'Corwin,'* p. 96 (1883); *B., B., & R. Water-B. N. Amer.* i. p. 511 (1884); *Coues, Key N. Am. B.* p. 692, fig. 480; *Radde, Ornis Cauc.* p. 455 (1884); *Blakist. Amend. List B. Jap.* p. 9 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 243 (Shoa) (1884); *Saund. Yarrell's Hist. Br. B.* iv. p. 380 (1884–85); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 153 (1885); *A. O. U. Check-list N. Am. B.* p. 117, n. 143 (1886); *Turner, Contr. N. H. of Alaska*, p. 133 (1886) *Salvad. El. Ucc. Ital.* p. 259 (1886); *Nels. Nat. Hist. Coll. in Alaska*, p. 69 (1887); *Ridgw. Man. N. Am. B.* p. 97 (1887); *Schier, MT. orn. Ver. Wien*, 1887, p. 23 (breeding in Bohemia); *Martin, Bull. Soc. Zool. Fr.* 1887, p. 88 (breeding near Brenne); *Stejn. Pr. U.S. Nat. Mus.* 1887, p. 136 (Commander I.), 1888, p. 97 (Hawaiian Isl.); *Oates, Ibis*, 1888, p. 73 (Bhamo); *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Salvad. & Giyl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 131 (Japan) (1888); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 320 (Shoa) (1888); *Dorries, J. f. O.* 1888, p. 93 (E. Siberia); *Cory, Auk*, 1888, p. 62 (Cuba, Jamaica, Porto Rico); *id. B. W. Ind.* p. 263 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Everett, Journ. Str. Br. R. As. Soc.* 1889, p. 192 (Borneo); *Saunders, Man. Brit. B.* p. 417; *Lilford, Col. Fig. Brit. B.* pt. xiii. (1890); *Steere, List B. & M. of the Philippines*, p. 27 (Luzon) (1890); *Evans, Ibis*, 1891, p. 72 (incubation); *Sharpe, ibid.* p. 116 (Fao); *Styan, ibid.* pp. 328, 496; *Sharpe, Sec. Yark. Miss., Aves*, p. 131 (1891); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 302 (1891); *Hatch, B. of Minnes.* p. 49 (1892); *Scott Wils. Aves Hawaii.* pt. iv. p. — (1893); *Chapm. Ibis*, 1894, p. 349 (W. Jutland, breeding); *Oust. Ois. Turkest. etc.* (*Nouv. Arch. Mus.* (3) vi. p. 100, 1894).

Querquedula caudacuta, *Macgill. Man. Orn.* ii. p. 170 (1842).

Dafila longicauda, *Brehm, Naumannia*, 1855, p. 297.

Dafila caudata, *Brehm, ibid.*

Dafila acuta *a.* americana, *Bp. Compt. Rend.* xliii. p. 650 (1856).

Anas (Dafila) acuta, *Schrenck, Vög. d. Amur-Lande*, p. 481 (1860);

Radde, Reise S. O.-Sibir. ii. p. 371 (1863); *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 53 (1882).
Daphila acuta, *Gieb. Thes. Orn.* ii. p. 14 (1875).
Daphila longicauda, *Gieb. ibid.*

Hybrids.

Dafila acuta × Rhynchaspis clypeata, *Selys, Bp. Compt. Rend.* xliii. p. 650 (1856).
Anas boschas × Dafila acuta, *A. Newt. P. Z. S.* 1860, p. 338, pl. clxviii.
Anas acuta×A. querquedula, *Leadb. P. Z. S.* 1862, p. 84.
Dafila acuta ♂ × Anas boschas (domestica) ♀, *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 308, Taf. 389. f. 3 (1860); *Sclat. P. Z. S.* 1880, p. 515.
Pintail ♂ × Common Duck ♀, *Yarrell, Hist. Brit. B.* (*Saund. ed.*), iv. p. 383 (1884–85).

Adult male. Head and upper neck plain hair-brown, darker on crown, and faintly glossed on sides of occiput with purple; upper half of hind neck black, with a white stripe on each side, confluent with the white of the lower neck and breast; lower hind neck greyish brown; back, sides, and flanks waved with grey and dusky; upper tail-coverts black, the median broadly edged with grey; longer scapulars velvety black, edged with whitish; wing-coverts uniform brownish grey, the last row broadly tipped with cinnamon, producing a distinct bar; primaries brownish grey, darker towards the tip; speculum varying from dull metallic green to bronzy purple, tipped with white, and crossed by a subterminal bar of velvety black; the inner quill of the speculum velvety black, with a white band along the inner part of the outer web; tertials grey, marked with a velvety black median stripe; abdomen whitish, dusted with grey, lower flanks with a buff tinge; under tail-coverts black, the outer ones white on the outer web; central tail-feathers long, acuminate, and black, remainder of the tail-feathers dusky grey, edged with whitish: bill blackish, with the sides dull lead-blue; feet greyish black; irides dark brown. Total length from 24 to 30 inches, wing 11, middle tail-feathers 7·25–9·50, culmen 1·85–2·15, tarsus 1·55–1·85.

Adult female. Above greyish dusky, varied with irregular bars of yellowish white or pale ochraceous; head and neck whitish buff, each feather, except on throat, streaked with blackish; lower parts dingy white, the flanks, the abdomen, and under tail-coverts streaked with dusky; wings brown, smaller wing-coverts tipped with whitish; the greater wing-coverts and the secondaries are tipped with white, forming two white bars across the wing, but the space between them is dull brown, mottled with black, without any metallic gloss of any kind (*Seebohm*): tail brown, with oblique buffish spots or bars. Total length 21–23·50 inches, wing 9·60–10·10, middle tail-feathers 4·50–5, culmen 1·80–2·10, tarsus 1·65.

Young in first plumage closely resemble adult females, but young males may always be distinguished by having an alar speculum (*Seebohm*).

Males in first nuptial plumage have pale margins to the wing-

coverts, and most of the feathers of the rump are broadly barred, instead of finely vermiculated, with white (*Seebohm*).

Adult males in moulting-plumage may be distinguished from adult females by having an alar speculum, and being richer and darker in colour (*Seebohm*).

Young in down have the same pale spots on the upper parts as those of the Mallard, but the white on the throat and belly is slightly suffused with grey instead of buff, and in addition to the dark line passing through the eye, a second dark line passes from the lores below the eye to the nape (*Seebohm*).

According to some ornithologists, European specimens differ very appreciably from North American in having a narrower speculum (*B., B., & R.*), but I have failed to find that there is any appreciable difference.

Hab. Northern Hemisphere, breeding in the northern parts, and migrating southward to Northern Africa, India, Ceylon, China, and Japan, and in America as far as Panama and Cuba.*

a. ♀ juv. sk.	Shetland, April.	H. J. Elwes, Esq [P.].
b. ♂ juv. st.	Aldeburgh, Suffolk, Sept.	Theodore Fisher, Esq. [P.].
c. ♀ ad. st.	Cambridgeshire.	Purchased.
d. ♂ ad. sk.	Kent.	Montagu Coll.
e. ♂ ad. sk.	Devonshire.	Montagu Coll.
f. Pull. sk.	Valkenswaard, Holland.	Salvin-Godman Coll.
g, h. ♂ ad. et ♂ imm. sk.	Arcachon, France, Jan., Nov. (*E. V. Seebohm*).	Seebohm Coll.
i. ♂ ad. sk.	S. Spain.	Lord Lilford [P.].
k. ♂ ad. sk.	Near Seville, Spain, Feb. (*H. Saunders*).	Tweeddale Coll.
l. ♂ ad. sk.	Egypt, Feb. (*G. E. S.*).	Shelley Coll.
m. ♀ ad. sk.	Egypt, March.	Dr. Worthington [P.].
n. ♀ ad. sk.	Angollala (*Harris*).	India Museum [P.].
o. Pull. st.	Archangel.	R. B. Sharpe, Esq. [P.].
p. ♂ juv. sk.	Nerimowskaja, Ob River, Sept.	Dr. O. Finsch [P.].
q, r. ♂ ♀ ad. sk.	Yen-e-sai, Siberia, Lat. 66½° June.	Seebohm Coll.
s. ♂ ad. sk.	Omsk, May.	St. G. Littledale, Esq. [P.].

* DAFILA MODESTA.

Dafila modesta, *Tristr. P. Z. S.* 1886, p. 79, pl. vii. (Sydney I., Phœnix Group, Centr. Pacific); *id. Cat. Coll. B.* p. 50 (1889); *Lister, P. Z. S.* 1891, pp. 289, 298, 300; *Wiglesw. Aves Polyn.* p. 71 (1891).

Canon Tristram has kindly sent me for inspection the types of his *D. modesta*; the male is immature, has the right wing cut, and has been kept in confinement; I cannot distinguish them from some specimens of *D. acuta*; still, considering the locality whence they came, I do not think it quite safe, at least for the present, to identify *D. modesta* with *D. acuta*.

t–w. ♂ ♀ ad. sk.	Lob-nor, Feb. (*Prjevalsky*).	H. Seebohm, Esq. [P.].
x. ♂ juv. sk.	Fao, Persian Gulf, Oct.	W. D. Cumming, Esq. [P.].
y, z. ♂ ♀ ad. sk.	Babylon (*Commander Jones*).	India Museum [P.].
a', b', c'. ♂ ♀ ad. et ♂ juv. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
d'. ♀ ad. sk.	Kandahar, Feb.	Lt.-Colonel Swinhoe [P.].
e'. ♂ ad. sk.	Kandahar, Feb.	Hume Coll.
f'–i'. ♂ ♀ ad. et ♂ juv. sk.	India.	Purchased.
k'. ♂ ad. sk.	N. India.	India Museum [P.].
l'. ♂ ad. sk.	Guibee Dehra, Larkhana, Jan. (*A. O. H.*).	Hume Coll.
m'. ♂ ad. sk.	Roree, Upper Sindh, Jan.	Hume Coll.
n'. ♂ ad. sk.	Roree, Feb.	India Museum [P.].
o'. ♂ ad. sk.	Delhi.	Hume Coll.
p'. ♀ ad. sk.	Gurgaon, Delhi, Feb. (*W. N. Chill*).	Hume Coll.
q'. ♂ ad. sk.	Kumaon (*Strachey*).	India Museum [P.].
r'–v'. ♂ ♀ ad. et ♂ juv. sk.	Etawah, Nov.	Hume Coll.
w'–e''. ♂ ♀ ad. et juv. sk.	Allahabad, March, Nov., Dec. (*A. O. H.*).	Hume Coll.
f''. ♀ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
g'', h''. ♂ ad. sk.	Oudh, Dec., Jan.	Hume Coll.
i''. ♂ ad. sk.	Sultanpur, Oudh, Feb.	Hume Coll.
k''. ♂ ad. sk.	Hurdui, Oudh, Feb. (*A. Anderson*).	Seebohm Coll.
l''–o''. ♂ ♀ ad. sk. et ♂ juv. st.	Nepal.	B. H. Hodgson, Esq. [P.].
p''. ♀ ad. sk.	Nepal Dolaka, Jan.	Hume Coll.
q''. ♂ ad. sk.	Manoura, Nepal, April.	J. Scully, Esq. [P.].
r''. ♀ ad. sk.	Native Sikhim, Oct. (*L. Mandelli*).	Hume Coll.
s''. ♂ ad. sk.	Bootan (*Pemberton*).	India Museum [P.].
t''. ♂ imm. sk.	Bengal (*Falconer*).	India Museum [P.].
u''. ♀ ad. sk.	Nandurbar, Feb.	Hume Coll.
v''. ♀ ad. sk.	Raipur.	Hume Coll.
w''. ♀ ad. sk.	Madras.	Hume Coll.
x''. ♀ ad. sk.	Tonghoo, Nov. (*R. G. W. R.*).	Tweeddale Coll.
y''. ♀ ad. sk.	Lower Pegu, Feb.	E. W. Oates, Esq. [C.].
z''. ♂ ad. st.	China.	J. R. Reeves, Esq. [P.].
a^3, b^3. ♂ ♀ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
c^3. ♂ ad. sk.	Amoy, China, Feb. (*R. Swinhoe*).	Seebohm Coll.
d^3. ♀ juv. sk.	Shanghai, China, March (*R. Swinhoe*).	Seebohm Coll.
e^3. Juv. sk.	Kiukiang, China, Feb.	F. W. Styan, Esq. [P.].
f^3. ♂ ad. sk.	Nagasaki, Japan.	F. Ringer, Esq. [P.].
g^3, h^3. ♂ ♀ ad. sk.	Awomeri, Japan, April.	Seebohm Coll.

i^3. ♂ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
k^3. ♀ juv. sk.	Bintulu, Nov.	Purchased.
l^3. ♂ juv. sk.	Labuan, Dec.	A. H. Everett, Esq. [C.].
m^3. ♀ juv. sk.	Sarawak.	Wallace Coll.
n^3. ♀ ad. st.	N. America.	Sir G. Back [P.].
o^3. ♂ juv. sk.	Kotzebue Sound.	Capt. Kellett & Lieut. Wood [P.].
p^3, q^3. ♂ juv. et pull. sk.	St. Michael's, Alaska, July, Aug. (*E. W. Nelson*).	Salvin-Godman Coll.
r^3, s^3. ♂ juv. sk.	W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
t^3, u^3. ♂ ad. et ♂ juv. sk.	British Columbia.	J. K. Lord, Esq. [P.].
v^3. ♂ ad. sk.	Washington, D. C., March.	Salvin-Godman Coll.
w^3. ♂ ad. st.	Missouri Brakes, Montana, April.	E. S. Cameron, Esq. [P.].
x^3. ♂ ad. sk.	Fort Dufferin, April.	N. America Boundary Comm. [P.].
y^3, z^3. ♂ ad. et ♂ juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
a^4. ♂ ad. sk.	Canada.	Government of Canada [P.].
b^4. ♂ ad. sk.	Indiana.	Salvin-Godman Coll.
c^4. ♀ imm. sk.	Washoe Lake, Nevada, Nov.	Salvin-Godman Coll.
d^4. ♀ ad. sk.	Weaverville, N. California, March (*J. S. Cairns*).	Salvin-Godman Coll.
e^4–p^4. ♂ ♀ ad. et juv. sk.	Corpus Christi, Texas, Jan., Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
q^4–u^4. ♀ ad. sk.	Tarpon Springs, Florida, Jan., Nov. (*W. E. D. Scott*).	Salvin-Godman Coll.
v^4. ♂ ad. sk.	Zacatecas, Mexico (*W. B. Richardson*).	Salvin-Godman Coll.
w^4. ♀ ad. sk.	Dueñas, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
x^4. ♀ ad. sk.	San José, Costa Rica, May (*M. L. Calleja*).	Salvin-Godman Coll.
y^4. ♂ ad. sk.	Antigua, Constancia (*O. S.*).	Salvin-Godman Coll.
z^4. Pull. st.		Zool. Soc.
a^5. ♂ skeleton.	London Market, March.	Purchased.
b^5. Skeleton.		
c^5. Skeleton (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].

HYBRIDS.

Dafila acuta × *Anas boscas.*

d^5, e^5. Ad. st.	Great Britain.	Old Coll.
f^5. Ad. st.	Great Britain.	Frederick Bond, Esq. [P.].
g^5. ♂ ad. sk.	Beardstown, Illinois, April.	H. Saunders, Esq. [P.].

2. Dafila eatoni. (Plate III.)

Querquedula sp., *G. R. Gr. List B. Brit. Mus.* iii. p. 138 (Kerguelen I.) (1844).

Querquedula kerguelensis, *Clarke, Wreck of the 'Favorite,'* p. 186 (1850) (descr. nulla).

Querquedula eatoni, *Sharpe, Ibis*, 1875, p. 328 (Kerguelen Island); *Coues, Contr. Nat. Hist. Kerg. Is.* p. 4 (1875); *Kidder & Coues, Bull. U.S. Nat. Mus.* ii. p. 4 (1875); *Cab. J. f. O.* 1875, p. 449; *Kidder, op. cit.* iii. p. 7 (eggs) (1876); *Cab. & Reichw. J. f. O.* 1876, p. 329; *Sharpe, Trans. Ven. Exped., Zool., Birds*, p. 5, pl. vi. (1877); *Eaton, ibid.* p. 7 (Crozettes) (1877); *Sclat. P. Z. S.* 1878, p. 578; *Sharpe, Phil. Trans.* clxviii. p. 105, pl. vi. (1879); *Eaton, ibid.* p. 107 (Crozettes) (1879); *Moseley, Notes*, pp. 190, 191 (1879); *Sclat. P. Z. S.* 1879, p. 310 (eggs), 1880, p. 523; *id. Voy. Challeng., Birds*, pp. 113, 150 (1881); *Milne-Edw. Rech. Faun. Rég. Austr.* chap. ix. p. 40 (1882); *B., B., & R. Water-B. N. Am.* ii. p. 2 (note) (1884); *Pagenst. Jahrb. d. Hamb. Wissensch. Anst.* ii. p. 8 (part) (1884); *Cab. J. f. O.* 1888, p. 118.

Adult male. Head and upper part of the neck dark brown, the feathers with narrow central darker stripes; nape blackish with pale dottings; interscapular region and back brown, waved with narrow whitish bars; scapulars long and acuminate, black, with greyish edges, the outer ones black on the apical part outwardly; upper tail-coverts brown edged with whitish, the outer ones black on the outer web; underparts dull greyish, with a slight brown tinge on the crop-region, which is thickly dotted with small blackish spots or streaks, the latter finer on the breast; sides and flanks regularly barred with black and white, the white bars the narrowest; crissum black in the middle, greyish outwardly; wings greyish brown; speculum bronzy green, but the upper and lower parts velvety black, bounded anteriorly by a narrow cinnamon band at the tip of the last row of the upper wing-coverts, and posteriorly by a subapical black band and by an apical one white; tertials grey on the outer web, blackish on the inner one, the outer tertial velvety black on the outer web, and with a very distinct whitish band along the inner part of the outer web; primaries brown on the outer web and at the tip, paler grey on the inner web; under wing-coverts brown-grey, with pale edges; tail brown-grey, the central tail-feathers black, elongated and acuminate: bill blackish, but probably in the living bird plumbeous; feet also dark in dry skins. Total length about 17 inches, wing 9·1, central tail-feathers 6, culmen 1·35, tarsus 1·35.

Female. Similar in colouring to the female of *D. acuta*, only dull greyish on the lower parts, breast with fine dusky streaks, and dimensions much smaller. Head rufescent grey, thickly streaked with black; the black streaks broader on the upper part of the head; speculum brown without any metallic lustre, margined with white anteriorly and posteriorly at the tip of the last row of the upper wing-coverts and at the tip of the secondaries. Total length about 14 inches.

Immature male. Resembles the female, but has the wings as in the adult male.

Young. Resembles the female, but has the feathers of the lower parts centred with brown streaks.

Young in down. Similar to the young in down of *D. acuta*, but the sides of the head distinctly rufescent; a tinge of the same appears also on the throat, breast, and sides.

The type of this species is an immmature male, and does not show the characteristics of the genus, which are quite evident in the fully adult male—almost a miniature of the male Pintail.

Hab. Kerguelen Island, and apparently also Crozette Islands.

a-f. ♂ ♀ ad., juv., et pull. sk.	Kerguelen I.	'Challenger' Exped. [C.].
g, h. ♀ ad. et ♂ imm. sk.	Kerguelen I. (*Eaton*).	The Admiralty [P.]. (Types of the species.)
i, k, l. ♂ ♀ ad. sk.	Kerguelen I.	Antarctic Exped. [C.].
m. Imm. sk.	Crozette I.	Capt. Armson [P.].

3. Dafila spinicauda.

Pato cola aguda, *Azara, Apunt.* iii. p. 421, n. 429 (Buenos Ayres) (1805) undè

Anas spinicauda, *Vieill. N. D.* v. p. 135 (1816); *id. Enc. Méth.* i. p. 356 (1823); *Burm. La Plata-Reise*, ii. p. 515 (Paraná) (1861); *Schleg. Mus. P.-B.*, Anseres, p. 38 (1866); *Gieb. Thes. Orn.* i. p. 362 (1872).

Anas oxyura, *Licht. in Mus. Berol.*; *Meyen, Nova Acta*, xvi. *Suppl.* i. p. 122 (Chili) (1834); *Merrem, Ersch & Grub. Enc.* sect. i. vol. xxxv. p. 43 (1841); *G. R. Gr. Gen. B.* iii. p. 616, n. 22 (1845); *DesMurs, in Gay's Faun. Chil.* i. p. 449 (1848); *Licht. Nomencl. Av.* p. 101 (1854); *Cass. U.S. Astr. Exp.* ii. p. 202 (1856); *Burm. La Plata-Reise*, ii. p. 515 (Mendoza) (1861); *Phil. & Landb. Cat. Av. Chil.* p. 41 (1868); *Philippi, Ornis*, iv. p. 160 (1888) (Antofagasta); *Waugh & Lataste, Act. Soc. Sc. Chili*, iv. p. lxxxix (Peñaflores) (1894).

Erismatura spinicauda, *G. R. Gr. Gen. B.* iii. p. 627, n. 7 (1844); *Hartl. Ind. Azar. Apunt.* p. 27, n. 429 (1847); *G. R. Gr. Gen. B.* iii. Append. p. 28 (1849); *Pelz. Orn. Bras.* pp. 321, 460, lix (S. Brazil) (1870).

Dafila oxyura, *Rchnb. Syn. Av.*, Natatores, t. 88. ff. 920–921 (1845); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *G. R. Gr. Hand-list*, iii. p. 81, no. 10635 (1871); *Tacz. P. Z. S.* 1874, p. 554 (Peru), 1882, p. 47 (N.E. Peru); *Philippi, Ornis*, iv. p. 160 (Antofagasta) (1888).

Dafila spinicauda, *Ep. Compt. Rend.* xliii. p. 650, n. 113 (1856); *Sclat. & Salv. P. Z. S.* 1868, p. 146 (Rep. Arg.), 1869, p. 157 (Tinta, Peru); *iid. Ibis*, 1870, p. 501; *Sclat. P. Z. S.* 1870, pp. 665, 666, pl. xxxviii.; *G. R. Gr. Hand-list*, iii. p. 81, n. 10634 (1871); *Burm. P. Z. S.* 1872, p. 367 (Argentine); *Garrod, P. Z. S.* 1873, pp. 467, 639; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *iid. P. Z. S.* 1876, pp. 17, 392 (Peru); *Durnf. Ibis*, 1876, p. 163, 1877, pp. 41, 192, 1878, pp. 64, 401 (Centr. Patag.); *Sclat. P. Z. S.* 1880, p. 515; *Sharpe, P. Z. S.* 1881, p. 14; *Salv. Cat.*

B. Strickl. Coll. p. 533 (1882); *Milne-Edw. Rech. Faun. Rég. Austr.* ch. ix. p. 45 (1882); *White, P. Z. S.* 1883, p. 42; *Sclat. List Vert. An.* 8th ed. p. 433 (1883); *Barrows, Auk*, 1884, p. 274 (Entrerios); *Boeck, MT. orn. Ver. Wien*, 1884, p. 167 (extract, p. 24) (Cochabamba, Bolivia); *Sclat. P. Z. S.* 1886, p. 402 (Tarapacá); *Tacz. Orn. Pér.* iii. p. 481 (1886); *Berl. J. f. O.* 1887, p. 133 (Paraguay?); *Sclat. Argent. Orn.* ii. p. 134 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Sclat. P. Z. S.* 1891, p. 136 (Tarapacá); *Sclat. Ibis*, 1890, p. 425; *Finn, P. Z. S.* 1891, p. 178 (ductus Botalli); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 209 (1891); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Kerr, Ibis*, 1892, p. 146; *Holland, Ibis*, 1892, p. 207; *Berkeley James, New List Chil. B.* p. 9, n. 157 (1892); *Aplin, Ibis*, 1894, p. 201 (Uruguay).

Dafila urophasianus, *Sclat.* (*nec Vig.*) *P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 160 (Falklands).

Anas (Dafila) spinicauda, *Burm. J. f. O.* 1860, p. 266, n. 246 (Mendoza); *Milne-Edw. Rech. Faun. Rég. Austr.* chap. ix. p. 45 (1882).

Anas (Dafila) caudacuta, *Burm.* (*nec Pall.*) *ibid.* p. 247 (Paraná).

Dafila sp., *Sclat. & Salv. Ibis*, 1868, p. 189 (Sandy Point).

Dafila caudacuta, *G. R. Gr. Hand-list*, iii. p. 81, n. 10633 (Paraná) (1871).

Daphila spinicauda, *Gieb. Thes. Orn.* ii. p. 14 (1875).

Anas (Dafila) spinicauda, *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 53 (1882).

Hybrids.

Dafila spinicauda ♂ × Æx sponsa ♀, *Finn, P. Z. S.* 1891, p. 330 (♂).

Adult male. Above brown, feathers black in the centre, those of the back, rump, and upper tail-coverts margined with greyish brown, the scapulars margined with rufous-brown; head above rufous-chestnut, sides of the feathers and upper neck pale brown, thickly dotted or streaked with blackish along the centre of each feather; throat whitish, almost immaculate; the feathers of the lower parts blackish brown in the centre, those of the upper breast, sides, flanks, and under tail-coverts with rufescent edges, those of the lower breast and abdomen whitish on the edges; wings greyish brown; speculum black, glossed with green, margined by two whitish-buff bands—one above, formed by the tips of the greater wing-coverts, and the other below, formed by the tips of the secondaries; inner tertials greyish brown, with a broad velvety-black stripe along the middle; tail greyish brown, the edges of the feathers rufous: bill black, at the base yellow, or "yellow with black culmen" (*Coppinger*): feet plumbeous, irides brown. Total length 20 inches, wing 9·2, middle tail-feathers 5·8, tarsus 1·6.

Female. Similar to the male, but more greyish and less rufescent, especially on the head; tail shorter.

Young male. Similar to the female, but the top of the head tinged with rufous, and the throat with brown dots or streaks like the sides of the head.

Hab. South America, from Southern Brazil on the East and Southern Peru on the West to Magellan Straits and Falkland Islands.

a. ♂ ad. st.	Tinta, Peru, June.	H. Whitely, Esq. [C.].
b. ♂ ad. sk.	Laguna de Tangasuca, Peru (*H. Whitely*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Laguna de Langui, Feb. (*H. Whitely*).	H. J. Elwes, Esq. [P.].
d. Ad. sk.	Chili.	Purchased.
e, *f*. Ad. sk.	Chili (*E. C. Read*).	Purchased.
g. Ad. sk.	Chili (*E. C. Read*).	Salvin-Godman Coll.
h. ♂ ad. sk.	Rio Bueno, Chili, Jan.	H. Berkeley James, Esq. [P.].
i, *k*, *l*. ♂ ♀ ad. sk.	Sacaya, Prov. of Tarapacá, Chili, March.	H. Berkeley James, Esq. [P.].
m, *n*. ♂ ♀ ad. sk.	Sitani, Tarapacá, Jan.	H. Berkeley James, Esq. [P.].
o, *p*, *q*. ♂ ♀ ad. sk.	Corral, Chili, Oct.	H. Berkeley James, Esq.]P.].
r–*u*. ♂ ad. et ♂ ♀ juv. sk.	Rio Pilmaiquen, Chili, Feb.	H. Berkeley James, Esq. [P.].
v–*y*. ♂ ♀ ad. et juv. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
z. Ad. sk.	Talcahuano, Sept.	Dr. Coppinger [C.].
a'. Juv. sk.	Sandy Point, Str. of Magellan, Dec.	Salvin-Godman Coll.
b'. ♂ ad. sk.	Falkland Is.	Tweeddale Coll.
c', *d'*. ♂ ♀ imm. sk.	Uruguay, Sept.	Alan Peel, Esq. [C.].
e'. ♂ ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
f', *g'*. Pull. sk.	Moreno, Buenos Ayres, Nov.	H. Durnford, Esq. [P.].
h'. Pull. sk.	Bred in confinement.	Lord Lilford [P.].

HYBRID.

Dafila spinicauda ♂ × *Æx sponsa* ♀.

i'. ♂ ad. sk.	Bred in confinement (*Zool. Soc.*).	Frank Finn, Esq. [P.].

33. PŒCILONETTA.

Type.

Pæcilonitta, *Eyton, Mon. Anat.* p. 31 (1838) ..... P. bahamensis.
Pœcilonitta, *G. R. Gr. List Gen. B.* p. 74 (1840).
Pœcilonetta, *Agassiz, Nomencl. Zool., Aves*, p. 61 (1842–46).

Range. Southern America from the West Indies southwards, and Africa south of the Sahara.

Key to the Species.

a. Tail and upper tail-coverts pale rufous, nearly uniform; central tail-feathers much elongated and acuminate.
  a'. Cheeks pure white, with no dark spots: size larger; wing 8·4 to 10 inches ..... *bahamensis*, p. 282.

b'. Cheeks whitish, thickly speckled with brown: size smaller; wing 7·5 inches .. *galapagensis*, p. 284.

b. Tail and upper tail-coverts brown, the feathers with narrow whitish or greyish edges; central tail-feathers not particularly elongated ..... *erythrorhyncha*, p. 285.

1. Pœcilonetta bahamensis.

Mareca, Anatis sylvestris species, *Marcgr. Hist. Br.* libr. v. p. 214 (1648).

Anas bahamensis, *Catesby, Carolina*, i. p. 93, t. 93 (1754); *Briss. Orn.* vi. p. 358 (1760).

Ilathera Duck, *Catesby, ibid.*; *Lath. Syn.* iii. 2, p. 507, n. 53 (1785).

Anas bahamensis, *Linn. S. N.* i. p. 199, n. 17 (1766) (*ex Catesby*); *Gm. S. N.* i. 2, p. 516, n. 17 (1788); *Lath. Ind. Orn.* ii. p. 855, n. 58 (1790); *Vieill. N. D.* v. p. 125 (1816); *Licht. Abh. k. Ak. Wissensch. Berl.* 1816–17, p. 172; *Dum. Dict. Sc. Nat.* vi. p. 386 (1817); *Wied, Beitr.* iv. p. 925 (S.E. Brazil) (1832); *Fraser, P. Z. S.* 1843, p. 119 (Chili); *Tsch. Wiegm. Arch.* 1844, i. p. 315 (Peru); *id. Faun. Per., Aves*, p. 54, n. 2 (1846); ? *Yarrell, P. Z. S.* 1847, p. 54 (Chili; egg); *Burm. Syst. Ueb.* iii. p. 436 (1856); *Cab. J. f. O.* 1857, p. 227 (Anmerk.); *Gundl. J. f. O.* 1861, p. 191 (Cuba); *Schleg. Mus. P.-B.*, Anseres, p. 55 (1866); *Sund. Œfv. K. Vet.-Ak. Förh.* 1869, p. 591; *Gieb. Thes. Orn.* i. p. 345 (1872).

Marec, *Buff. Hist. Nat. Ois.* ix. p. 256 (1783).

Anas ilathera, *Bonn. Enc. Méth.* i. p. 151 (1791).

Pato pico aplomado y roxo, *Azara, Apunt.* iii. p. 436, n. 433 (Buenos Aires) (1805).

Canard à bec rouge et plombé, *Sonnini, Azar. Voy.* iv. p. 340, n. 433 (1809).

Anas rubrirostris, *Vieill. N. D.* v. p. 108 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 353 (1823); *G. R. Gr. Gen. B.* iii. p. 616, n. 16 (1845).

Mareca bahamensis, *Steph. Gen. Zool.* xii. 2, p. 137 (1824).

Anas urophasianus, *Vig. Zool. Journ.* iv. p. 357 (N.W. America!) (1829); *Less. Compl. de Buff., Ois.* ix. p. 536 (1837); *id. op. cit.* 2nd ed. p. 722 (1838); *Vig. Zool. Beechey's Voy., Orn.* p. 31, pl. 14 (1839); *Milne-Edw. Rech. Faun. Rég. Austr.* chap. ix. p. 46 (1882).

Phasianurus vigorsii, *Wagl. Isis*, 1832, p. 1235.

Dafila urophasianus, *Eyt. Mon. Anat.* p. 112, pl. 20 (1838); *Bridges, P. Z. S.* 1841, p. 95 (Chilian Andes); *Fraser, P. Z. S.* 1844, p. 157 (Chili); *Rchnb. Syn. Av.*, Natatores, t. 86. f. 2336 (1850) (*ex Beechey's Voy.*); *Eyt. Syn. Anat.* p. 64 (1869); *Tristr. Cat. Coll. B.* p. 50 (type, Chili, *Eyt. Mus.*) (1889).

Pœcilonitta bahamensis, *Eyton, Mon. Anat.* p. 116 (1838); *Bp. Compt. Rend.* xliii. p. 650, n. 115 (1856); *Eyt. Syn. Anat.* p. 68 (1869).

Pœcilonitta bahamensis, *G. R. Gr. List Gen. B.* p. 74 (1840).

Anas fimbriata, *Merrem, Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 35 (1841) (*ex Azara*).

Dafila bahamensis, *G. R. Gr. List B. Brit. Mus.* iii. p. 135 (1844); *id. Gen. B.* iii. p. 615, n. 2 (1845); *Hartl. Erst. Nachtr.* p. 19, n. 221 (1846); *id. Ind. Azar. Apunt.* p. 27, n. 433 (1847); *Cab. in Schomb. Guiana*, iii. p. 763 (1848); *DesMurs, in Gay's Faun. Chil.* i. p. 448 (1848); *Hartl. Naumannia*, 1853, p. 222; *Licht. Nomencl. Av.* p. 102 (1854); *Cass. U.S. Astron. Exp.* ii. p. 203 (California!, Chili) (1856); *id. U.S. Expl. Exp., Mamm. & Orn.*

p. 341 (1858); *Baird, B. N. Am.* p. 776 (note) (1858); *Pelz. Reise Novara, Vög.* p. 138 (Chili; egg) (1865); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Phil. & Landb. Cat. Av. Chili*, p. 41 (1868); *Sclat. & Salv. P. Z. S.* 1868, p. 146 (Conchitas); *Pelz. Orn. Bras.* pp. 320, 460, lviii (1870); *Burm. P. Z. S.* 1872, p. 367 (Argentine); *Pelz. Ibis*, 1873, p. 46; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *iid. P. Z. S.* 1876, p. 393 (part.); *Durnf. Ibis*, 1876, p. 163, 1877, p. 192 (Buenos Ayres); *Lawr. Pr. U.S. Nat. Mus.* i. p. 487 (Antigua, Guadeloupe) (1878); *Tacz. P. Z. S.* 1879, p. 243 (Tumbez, N. Peru); *Schmidt, P. Z. S.* 1880, p. 318; *Sclat. P. Z. S.* 1880, p. 516; *Cory, B. Bahama Isl.* p. 185 (1881); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Salv. Cat. B. Strickl. Coll.* p. 533 (1882); *Sclat. List Vert. An.* 8th ed. p. 435 (1883); *Barrows, Auk*, 1884, p. 274 (Pampas); *Boeck, MT. orn. Ver. Wien*, 1884, p. 167 (extract, p. 24) (Cochabamba, Bolivia); *Cory, B. Haiti and San Domingo*, p. 167 (1885); *id. List B. W. Ind.* p. 31 (1885); *Salv. Ibis*, 1886, p. 172; *Tacz. Orn. Pér.* iii. p. 482 (1886); *Mac-Farl. Ibis*, 1887, p. 203 (Arica, Mollendo); *Ridgw. Man. N. Am. B.* p. 98 (1887); *Berl. J. f. O.* 1887, p. 133 (Paraguay?); *Cory, Auk*, 1888, p. 62 (Bahamas and Antilles); *id. B. W. Ind.* p. 263 (1889); *Sclat. Argent. Orn.* ii. p. 135 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Meyer, Abb. Vogel-Skel.* Taf. cxvi. (1889); *Holl. & Sclat. Ibis*, 1890, p. 425; *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 314 (1891); *Frenz. J. f. O.* 1891, p. 125 (Cordoba); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 302 (1891); *Holland, Ibis*, 1892, p. 207; *Berkeley James, New List Chil. B.* p. 9 (1892).

Pœcilonetta bahamensis, *Rchnb. Syn. Av.*, Natatores, t. 83. f. 922 (1845); *Gosse, B. Jam.* p. 408 (1847); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 160 (Falklands); *Albrecht, J. f. O.* 1862, p. 207; *March, Pr. Acad. Philad.* 1864, p. 71; *Sclat. P. Z. S.* 1869, p. 629 (breeding); *G. R. Gr. Hand-list*, iii. p. 81, n. 10636 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico); *id. An. Soc. Esp. Hist. Nat.* vii. p. 403 (1878); *id. J. f. O.* 1878, pp. 162, 190, 1881, p. 400 (Cuba).

Pœcilonetta urophasianus, *Bp. Compt. Rend.* xliii. p. 650, n. 116 (1856).

Dafila urophasiana, *Baird, B. N. Am.* p. 776 (1858).

Anas (Dafila) bahamensis, *Burm. J. f. O.* 1860, p. 266: *id. La Plata-Reise*, ii. p. 515 (Uruguay) (1861); *Rchnw. Orn. Centralbl.* 1882, p. 206; *id. Vög. zool. Gärt.* p. 53 (1882).

Pœcilonetta urophasianus, *G. R. Gr. Hand-list*, iii. p. 81, n. 10637 (1871).

Daphila bahamensis, *Gieb. Thes. Orn.* ii. p. 14 (1875).

Adult male. Upper part of the head, nape, lower neck, upper back, breast, and abdomen reddish, with black spots, almost round, on the neck, breast, and abdomen; cheeks, sides of the head, and throat pure white; lower back and rump blackish brown; upper tail-coverts, tail, and under tail-coverts immaculate fawn-colour, the latter with a slight rosy tinge; the tail paler towards the tip; scapulars black, edged on both webs with reddish; wing dark slaty green, speculum glossy green, margined anteriorly by a fawn-coloured band, formed by the tips of the greater wing-coverts, and posteriorly by a velvety black band, followed by a broader one of a

fawn-colour, formed by the tips of the secondaries; tertials dusky brown edged with fawn-colour, the inner ones velvety black along the middle; under wing-coverts like the upper ones, but the greater ones grey, and the inner ones, like the axillars, whitish: bill bluish-lead, with two red or bright orange-yellow spots at the base of the upper mandible; feet brown. Total length 19 inches, wing 8·4–10, tail 5, culmen 1·85, tarsus 1·40.

Female. Similar to the male, but somewhat smaller and less bright, especially on the speculum.

Young male. Similar to the female.

Young in down. Very similar to the same stage of *Dafila acuta*, but the white of the sides of the head and underparts with a slight yellow tinge.

Hab. Bahamas, Antilles, and the whole of South America, with the Falklands, but not in Venezuela, Colombia, and Ecuador.

a. Ad. sk.	Antigua, W. Indies, Feb. (*Feilden*).	W. India Committee [P.].
b. ♂ ad. sk.	Cajutuba, Brazil (*Natterer*).	Salvin-Godman Coll.
c. Ad. sk.	Buenos Ayres, Aug.	H. Durnford, Esq. [P.].
d. Ad. st.	Chili.	C. Crawley, Esq. [P.].
e. Ad. st.	S. America.	J. E. Gray, Esq. [P.].
f, *g.* ♂ ad. et ad. sk.	Bred in confinement (Zool. Soc.), Feb., Oct.	H. J. Elwes, Esq. [P.]
h. Ad. st.		Dr. Günther [P.].
i, *k.* Pull. st.		Zoological Society.
l. Skeleton.		

2. Pœcilonetta galapagensis.

Pœcilonitta bahamensis, *Gould* (*nec Linn.*), *Zool. of the Beagle*, iii. p. 135 (Galapagos) (1841).

Anas bahamensis, *Sund. P. Z. S.* 1871, p. 126 (Galapagos).

Dafila bahamensis, *Sclat. & Salv. P. Z. S.* 1870, p. 323 (Indefatigable Island); *Salv. Tr. Zool. Soc. Lond.* ix. p. 499 (Galapagos) (1876); *Sclat. & Salv. P. Z. S.* 1876, p. 393 (part.); *Salv. P. Z. S.* 1883, p. 428 (Charles Isl.).

Pœcilonetta galapagensis, *Ridgw. Pr. U.S. Nat. Mus.* xii. p. 115 (1889).

Similar to *P. bahamensis* (Linn.), but white on sides of head thickly speckled with brown, instead of being quite immaculate, and top of head greyer brown; under tail-coverts less rufescent and more greyish; axillaries white, usually with brown spots along the middle. Total length about 14 inches, wing 7·5, tail 2·9, culmen 1·6, tarsus 1·3.

Hab. Galapagos Islands.

a. Ad. sk.	Charles I., Galapagos, Feb. (*Capt. A. H. Markham*).	Salvin-Godman Coll.
b, *c*, *d.* ♀ ad. et ♂ juv. sk.	Indefatigable I., Galapagos, Aug. (*Dr. Habel*).	Salvin-Godman Coll.

3. Pœcilonetta erythrorhyncha.

Crimson-billed Duck, *Lath. Syn.* iii. 2, p. 507, n. 52 (1785) (Cape of Good Hope).

Anas erythrorhyncha, *Gm. S. N.* i. 2, p. 517, n. 79 (1788); *Lath. Ind. Orn.* ii. p. 855, n. 57 (1790); *Bonn. Enc. Méth.* i. p. 126 (1790); *Dum. Dict. Sc. Nat.* vi. p. 380 (1816); *Burch. Travels*, i. p. 283 (1822), ii. p. 346 (1824); *G. R. Gr. Gen. B.* iii. p. 616, n. 14 (1845); *Smith, Ill. S. Afr. Zool., Birds*, pl. 104 (1845); *Des Murs in Lefebvre, Voy. Abyss., Ois.* p. 172 (1845–1850); *Licht. Nomencl. Av.* p. 101 (1854); *Blyth, J. A. S. B.* xxiv. p. 265 (Abyssinia) (1855); *Bolle, J. f. O.* 1856, p. 165 (Zool. Gard.); *Heugl. J. f. O.* 1863, p. 4; *Pelz. Reise Novara, Vögel*, p. 138 (Cape) (1865); *Schleg. Mus. P.-B.*, Anseres, p. 56 (1866); *id. P. Z. S.* 1866, p. 426 (Madagascar); *Layard, B. S. Afr.* p. 351 (1867); *Hartl. P. Z. S.* 1867, p. 827 (Zanzibar); *Heugl. Reise nach Abessin.* 1861–62, p. 266 (1868); *Schleg. & Poll. Rech. Faun. Madag.* p. 141 (1868); *Chapm. Trav. in S. Afr.* ii. App. p. 422 (1868); *Finsch & Hartl. Vög. Ost-Afr.* p. 808 (1870); *Gieb. Thes. Orn.* i. p. 350 (1872); *Hartl. Vög. Madag.* p. 362 (1877); *Shell. P. Z. S.* 1882, p. 310 (Mamboio); *Milne-Edw. & Grand. Ois. Madag.* p. 725, pl. 275. f. 4 (head) (1882); *Fischer, Zeitschr. ges. Orn.* 1884, p. 394 (Masai); *Böhm, J. f. O.* 1885, p. 62 (Karuma, C. Africa); *Emin, J. f. O.* 1891, p. 58 (Ugogo); *Rchnw. ibid.* p. 141; *Hartert, Kat. Vogelsamml.* p. 230 (1891); *Sibree, Ibis*, 1892, p. 270; *Rchnw. J. f. O.* 1892, p. 6 (Bukoba, Uganda); *id. Vög. Deutsch-Ost-Afr.* p. 26 (1894).

Anas melanura, *Vieill.* (*nec Gm.*) *N. D.* v. p. 135 (*nec* p. 155) (1816).

Tadorna erythrorhyncha, *Steph. Gen. Zool.* xii. 2, p. 75 (1824).

Querquedula erythrorhyncha, *Smith, Cat. S.-Afr. Mus.* p. 36, n. 325 (1837); *Bp. Compt. Rend.* xliii. p. 650, n. 100 (1856); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1325 (1873); *Holub, Beitr. Orn. Südafr.* p. 330 (1882); *Böhm, J. f. O.* 1885, p. 62; *Fischer, J. f. O.* 1885, p. 115 (Galla); *Dubois, Bull. Mus. Roy. d'H. N. de Belg.* iv. p. 149, n. 193 (1886) (Tanganyika); *Matschie, J. f. O.* 1887, pp. 137, 144.

Pœcilonitta erythrorhyncha, *Eyt. Mon. Anat.* p. 115 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 134 (Abyssinia) (1844); *Eyt. Syn. Anat.* p. 67 (1869).

Mareca erythrorhyncha, *Hartl. Verz. Ges. Mus.* p. 119 (1844).

Anas pyrrhorhyncha, *Forst. Icon. ined.* t. 73; *id. Descr. An.* (*ed. Licht.*) p. 45 (1844).

Pœcilonitta erythrorhyncha, *Rüpp. Syst. Uebers.* p. 138, n. 491 (Sennaar, Abyssinia) (1845); *Shell. Ibis*, 1885, p. 415 (Somali); *id. P. Z. S.* 1889, p. 371 (Kilimanjaro).

Anas punctata, *Rchnb.* (*nec Burch.*) *Syn. Av.*, Natatores, t. (xlix.) 85. ff. 915–916 (1845).

Anas pyrrhocephala, "*Forst.*" (errore), *Blyth, Cat. B. Mus. A. S. B.* p. 304, in syn. n. 1776 (1849).

Dafila erythrorhyncha, *Blyth, Cat. B. Mus. A. S. B.* p. 304, n. 1776 (1849); *Hartl. Orn. Beitr. Faun. Madag.* p. 82 (1861); *Pollen, N. T. D.* i. p. 327 (1863); *Roch & E. Newt. Ibis*, 1863, p. 174 (Madagascar); *Sclat. P. Z. S.* 1863, p. 165; *Verr. in Vinson's Voy. à Madag.*, Ann. B, p. 4 (1865); *Grand. Rev. et Mag. de Zool.* 1868, p. 5 (Madagascar); *Sclat. P. Z. S.* 1880, p. 315; *Butl., Feild., & Reid, Natural.* 1882, p. 427 (Natal); *Salv. Cat. B. Strickl.*

Coll. p. 533 (1882); *Sclat. List Vert. An.* 8th ed. p. 436 (1883); *Tristr. Cat. Coll. B.* p. 50 (1889).

Pœcilonetta erythrorhyncha, *Gurn. Ibis*, 1859, p. 251 (Natal), 1861, p. 134, 1862, p. 158, 1868, p. 471; *Boc. Jorn. Ac. Sc. Lisb.* 1867, p. 329; *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Boc. Jorn. Ac. Sc. Lisb.* 1871, p. 277, 1872, p. 70; *Anderss. B. Damara Land*, p. 339 (Damara and Great Namaqua-land) (1872); *Boc. J. f. O.* 1876, p. 294 (Rio Coroca); *Gurn. ibid.*; *Ayres, Ibis*, 1880, p. 272 (Transvaal); *Boc. Orn. Ang.* p. 501 (1881); *Sharpe in Oates' Matab.-Land*, p. 328 (1881); *id. Layard's B. S. Afr.* p. 754 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 244 (Shoa) (1884), vi. p. 32 (Shoa) (1888); *Shell. Ibis*, 1888, p. 307 (Tangani), 1894, pp. 28, 478 (Lake Shirwa); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 564 (Somali) (1894).

Nettion erythrorhyncha, *G. R. Gr. Hand-list*, iii. p. 84, n. 10668 (1871).

Dafila erythrorhyncha, *Gieb. Thes. Orn.* ii. p. 14 (1875).

Querquedula pyrrhorhyncha, *Holub, Beitr. Orn. Südafr.* p. 330, *in syn.* Q. erythrorhynchæ (1882).

Anas (Dafila) erythrorhyncha, *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 54 (1882).

Adult male. Upper half of the head, as far as the eyes, dark brown, sharply defined from the whitish of the sides of the head and throat; neck greyish, mottled with blackish spots; back and scapulars brown, the feathers edged with reddish buff; underparts whitish, each feather with greyish-brown spots, larger on the flanks, darker and better defined on the under tail-coverts; wings slaty grey; a narrow velvety-black speculum more or less with a green lustre, edged anteriorly by a reddish-fawn band formed by the tips of the last row of upper wing-coverts; a very broad band of the same colour on the apical half of the secondaries; under wing-coverts brown-grey, the greater ones paler and purer grey; tail dark brown, the edges of the feathers fawn-colour: "iris brown; legs, toes, and webs blackish purple; upper mandible dark purple, faintly tinged with green upon the ridge, the remainder of the mandible above the edge pinkish; lower mandible bluish pink" (*Andersson*); but, according to T. Ayres, "iris light umber; bill bright pink, darkest towards base of upper mandible; ridge dusky brown; tarsi and feet dark ash." Total length about 17 inches, wing 9, tail 3·8, culmen 1·62, tarsus 1·42.

Female. Similar, or scarcely different.

Young in down. Similar to the same stage of *P. bahamensis*, but a shade darker on the upper parts.

Hab. Africa, from the Cape to Angola on the West, and to Abyssinia and Sennaar on the East; Madagascar.

a. Ad. sk.	No locality.	Purchased.
b, c. Ad. st.	Africa.	Old Coll.
d. Ad. st.	Abyssinia.	Dr. Rüppell [C.].
e. ♀ ad. sk.	E. side of Kilimanjaro, June.	H. C. V. Hunter, Esq. [P.].
f–i. ♂ ♀ ad. sk.	Lake Shirwa, Nyassa-land, May (*A. Whyte*).	H. H. Johnston, Esq., C.B. [P.].

k. ♂ ad. sk.	Lamu, Aug.	F. J. Jackson, Esq. [P.].
l. Ad. sk.	Mamboio (*Kirk*).	Shelley Coll.
m, n. ♂ ♀ ad. sk.	Mapane Pan, Matabele, Nov.	W. E. & C. G. Oates, Esqrs. [P.].
o, p. ♂ ♀ ad. sk.	Potchefstroom, Transvaal, March, June (*T. Ayres*).	J. H. Gurney, Esq. [P.].
q. Ad. sk.	Potchefstroom.	F. A. Barratt, Esq. [P.].
r. Ad. sk.	Grahamstown (*E. L. Layard*).	Shelley Coll.
s, t. Ad. sk.	Madagascar.	Purchased.
u. ♂ ad. sk.	Central Madagascar.	Shelley Coll.
v, w. Pull. st.		Zool. Soc.
x. *Ad. st.	Zoological Gardens.	Zool. Soc.
y. Skeleton.		Zool. Soc.

34. ELASMONETTA.

	Type.
Elasmonetta, *Salvad. MS.*	E. chlorotis.

Bill compressed, soft on the edges of the apical part of the upper mandible; lamellæ extremely developed; wings well developed.

Range. Confined to New Zealand subregion.

1. Elasmonetta chlorotis.

Anas chlorotis, *G. R. Gr. Voy. Ereb. & Terr., Birds*, p. 15, pl. 20 (1846); *Rchnb. Syn. Av.*, Natatores, t. 85. f. 912 (184–) (*ex l. c.*); *G. R. Gr. Gen. B.*, App. p. 28 (1849); *Bp. Compt. Rend.* xliii. p. 649, n. 71 (1856); *G. R. Gr. Ibis*, 1862, p. 241; *Pelz. Reise Novara, Vögel*, p. 138 (1865); *Buller, Ess. on the Orn. New Zeal.* p. 18 (1865); *Hector, New Zeal. Exh.* p. 277 (Otago) (1866); *Finsch, J. f. O.* 1867, p. 336; *id. Tr. N. Z. Inst.* i. p. 72 (1869); ? *Travers, Trans. N. Z. Inst.* i. p. 178 (Chatham Isl.!) (1869) †; *Eyt. Syn. Anat.* p. 93 (1869); *Potts, Tr. N. Z. Inst.* ii. p. 72 (1870); *Hutt. Ibis*, 1870, p. 398 (Auckland); *Finsch, J. f. O.* 1870, p. 357; *Hutt. Cat. B. New Zeal.* p. 36 (1871); *G. R. Gr. Hand-list*, iii. p. 82, n. 10648 (1871); *Hutt. Ibis*, 1872, p. 250 (Chatham Isl.?); *Gieb. Thes. Orn.* i. p. 347 (1872); *Finsch, J. f. O.* 1872, p. 186; *Buller, Hist. B. N. Zeal.* p. 248 (1873); *Finsch, J. f. O.* 1874, p. 202; *Sharpe, Voy. Ereb. & Terr., Birds*, p. 31 (1875); *Sclat. P. Z. S.* 1880, p. 519; *Finsch, Ibis*, 1882, p. 397; *Bull. Man. B. New Zeal.* p. 68 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 19; *Milne-Edw. Rech. Faun. Rég. Austr.* chap. ix. p. 41 (1882); *Bull. Hist. B. New Zeal.* 2nd ed. ii. p. 257, pl. xlii. (upper fig. ♂) (1883); *Tristr. Cat. Coll. B.* p. 49 (1889); *Buller, Trans. N. Z. Inst.* xxv. 1892, p. 62 (1893).

Nesonetta aucklandica, *Hector* (*nec G. R. Gr.*), *New Zeal. Exh.* p. 277, n. 56 (1866); *cf. Finsch, J. f. O.* 1874, p. 202.

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* Sent as a hybrid between *P. bahamensis* and *Anas xanthorhyncha*, but is indistinguishable from *P. erythrorhyncha*.

† I have not been able to find this reference, quoted by Hutton.

Hybrids.

? Anas chlorotis ♂ (?)×Anas boscas ♀, *Buller, B. New Zeal.* 2nd ed. p. 259 (1883).

Adult male. Head and upper part of neck brown, the crown glossy, with a chestnut tinge; sides of the occiput and nape glossed with metallic green; throat more or less whitish; upper parts brown, the edges of the feathers paler, greyish brown; on the interscapular region the feathers are finely waved with black and rufous lines; the outer scapulars black on the outer web, waved with black and chestnut lines on the inner one; lateral upper tail-coverts black, glossed with green on the outer webs; a white collar, more or less distinct, separates in front the brown of the upper from the lower part of the fore neck, which is chestnut, shading into pale reddish on the breast and abdomen; these parts have numerous black spots, almost round, on the lower fore neck, more transverse on the breast and abdomen; flanks waved with rufous and black lines; under tail-coverts black, at the base of them on each side a white patch; wings brown; speculum black, metallic green on the upper part, bounded anteriorly by a narrow cinnamon band at the tip of the last row of the upper wing-coverts, and posteriorly by a rufescent white band at the tip of the secondaries; tertials edged with rufescent; under wing-coverts brown, the inner ones, with the axillaries, white; tail brown-black, with narrow rufescent edges to the feathers: "irides black: bill bluish black; the pectination of the upper mandible yellowish brown; feet dull slaty grey" (*Buller*). Total length about 18 inches, wing 8, tail 4, culmen 1·7, tarsus 1·5. (*Mus. Rothschild.*)

Female. Head and upper portion of the neck brown, the crown darker, each feather edged with rufous; sides of the head and throat with darker streaks; lower part of neck behind and upper surface dark brown, each feather margined with rufous; lower parts rufous-brown, each feather largely centred with brown; abdomen paler; sides and under tail-coverts darker; wings as in the male, but the upper wing-coverts with narrow rufous edges; tail brown: "bill greyish brown; legs pale yellowish brown" (*Buller*). Total length about 17 inches, wing 7·7, culmen 1·7.

Immature male. Similar to the female, and has no white collar in front of the neck and no gloss on the sides of the occiput and nape.

Young. Very similar to the adult female. (*Mus. Rothschild.*)

Young in down. "Covered with thick soft down, blackish brown, with lighter markings on the upper surface; chin and underparts yellowish brown." (*Buller.*)

Sir W. Buller speaks of an apparently smaller form of this Duck, brought from the West Coast Sounds by Mr. Reischek.

Hab. New Zealand, Chatham, and Auckland (?) Islands.

a, b, c. ♀ ad. et ♂ imm. sk.	New Zealand.	P. Earl, Esq. [C.]. (Types of the species.)

d, e, f. ♀ ad. et ♂ juv. sk.	New Zealand.	Wellington Museum [E.].
g, h. ♂ imm. et juv. sk.	New Zealand.	Sir G. Grey [P.].
i, k. ♂ ♀ ad. sk.	Foveaux Straits, New Zealand.	Capt. Stokes [P.].
l. Ad. sk.	Chatham Is.	Dr. H. O. Forbes [C.].

35. NESONETTA.

Nesonetta, *G. R. Gr. Gen. B.* iii. p. 627 (1844).... Type. N. aucklandica.

Range. Confined to the Aucklands.

1. Nesonetta aucklandica.

Nesonetta aucklandica, *G. R. Gr. Gen. B.* iii. p. 627 (excl. syn.), pl. 169. f. 4 (head, wing, and foot) (1844); *id. List B. Brit. Mus.* iii. p. 191 (excl. syn.) (1844); *id. Voy. Ereb. & Terr., Birds*, p. 16. pl. 17 (1846); *id. Gen. B.* Append. p. 28 (1849); *Rchnb. Syn. Av.*, Natatores, t. 77. f. 891 (*ex Erebus & Terror*) (184–?); *id. Av. Syst. Nat.* p. ix, t. vii. (1852); *Bp. Compt. Rend.* xliii. p. 651, n. 154 (1856); *G. R. Gr. Ibis*, 1862, p. 242; *Finsch, J. f. O.* 1870, p. 358; *G. R. Gr. Hand-list*, iii. p. 90, n. 10724 (1872); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Finsch, J. f. O.* 1872, p. 188; *Hutt. Trans. N. Z. Inst.* v. p. 238 (1873); *Finsch, J. f. O* 1844, p. 203; *Gieb. Thes. Orn.* ii. p. 700 (1875); *Sharpe, Voy. Ereb. & Terr., Birds*, p. 31 (1875); *Buller, Hist. B. New Zeal.* 2nd ed. ii. p. 263, pl. xlii. (lower fig.) (1888); *id. Trans. N. Z. Inst.* xxiv. 1891, p. 86 (1892) (young in down).

Erismatura (Nesonetta) aucklandica, *Rchnw. Orn. Centralbl.* 1882, p. 4.

Adult male. Head and upper portion of the neck blackish brown with a green gloss, especially on the nape; upper parts brown, with a green gloss and with brown-chestnut edges to the feathers; lower portion of hind neck, mantle, and scapulars waved with black and rufous-brown lines; lower part of fore neck and crop-region chestnut, changing into whitish on the breast and abdomen; on the crop-region and breast the feathers are centred with blackish round spots; abdomen crossed with dusky and whitish bars; sides and flanks waved with black and rufous bars; under tail-coverts blackish, mingled with brown; at the base of them, on each side, a not very distinct paler patch, waved with rufous-grey and black bars; wings brown, the feathers with narrow brown edges; secondaries obscurely glossed with green, and tipped with reddish white, forming a narrow apical band; under wing-coverts brown, broadly edged with white; tail blackish brown, almost uniform: "bill blackish brown; tarsus and feet reddish brown; irides dark hazel" (*Buller*). Total length from 17 to 18 inches, wing 5·5, tail 3·8, culmen 1·6, tarsus 1·25. (*Rothschild Coll.*)

Female. Much smaller than the male; head brown, with no green lustre; on the cheeks and throat the feathers edged with whitish; general colour brown, with a dark green lustre on the back and wings; crop-region, sides, and flanks brown-chestnut; on the flanks

the feathers have brown marks before the edge, nearly hidden; middle of the abdomen buffish, the tips of the feathers being of that colour, while the bases are dusky; wings browner than in the male; secondaries scarcely showing a green lustre, and with less conspicuous reddish-white apical band. Total length about 14 inches, wing 5, culmen 1·35. (*Rothschild Coll.*)

Young in down. "The body is covered with thick down, with long central filaments, especially on the upper parts. The general colour is dark olivaceous-brown, fading to pale fulvous-brown on the throat and fore neck, and to dull fawn colour on the breast and abdomen. There is a purer shade of dark brown passing through the eyes and melting away behind. The rudimentary wings have an outer fringe of yellowish brown; the produced filaments on the shoulders and mantle are of the same pale colour. The bill is dark brown, with the terminal shield and feet olivaceous-brown, the webs being darker; claws yellowish brown." (*Buller.*)

This bird is very nearly related to *Elasmonetta chlorotis*, having the same markings and colours, but has very small wings, useless for flight, and lamellæ of the bill much less developed.

Hab. Aucklands.

a. ♀ ad. sk.	Auckland.	Antarctic Exped. (Type of species.)
b. ♂ ? imm. sk.	[New Zealand.]	Sir G. Grey [P.].
c. Juv. st.	Auckland Island.	The Countess of Galloway [P.].
d, *e*. ♂ ♀ ad. sk.	Auckland Island.	The Hon. Walter Rothschild [P.].

36. QUERQUEDULA.

	Type.
Querquedula, *Steph. Gen. Zool.* xii. 2, p. 142 (1824)..	Q. circia.
Cyanopterus, *Eyton, Mon. Anat.* p. 38 (1838) (*nec Halid.* 1835)	Q. cyanoptera.
Pterocyanea, *Bp. Icon. Faun. Ital., Ucc. Introd.* p. 17 (1841)	Q. circia.
Punanetta, *Bp. Compt. Rend.* xliii. p. 649, gen. 28 (1856)	Q. puna.
Adelonetta, *Heine, Nom. Mus. Hein. Orn.* p. 346 (1890) (=Punanetta, *Bp.*).	

Range. Northern Hemisphere and Neotropical Region.

Key to the Species.

a. Upper wing-coverts grey lead-colour; upper tail-coverts distinctly barred across; sexes almost similar (*Punanetta*).

a'. Smaller; bill with a broad orange spot at the base of the upper mandible; rump like the upper tail-coverts, with narrow white bars .. *versicolor*, p. 291.

b'. Larger; bill light blue, with the ridge black, in dry skin uniform black; rump uniform brown-grey, with no white bars ..... *puna*, p. 293.

b. Upper wing-coverts pale blue; cheeks and sides of the upper part of the neck brown-vinous, streaked with white (male) ..... *circia*, p. 293.

c. Upper wing-coverts bright smalt-blue.

c'. A crescent-like white band between the eyes and the bill of the male; smaller, bill usually less than 1·65 ..... *discors*, p. 299.

d'. No crescent-like white band between the eyes and the bill of the male, which has the sides of the head, neck, breast, and sides bright chestnut; larger, bill usually more than 1·65. *cyanoptera*, p. 303.

1. Querquedula versicolor.

Pato pico de tres colores, *Azara, Apunt.* iii. p. 450, n. 440 (Paraguay) (1805).

Anas versicolor, *Vieill. N. D.* v. p. 109 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 353 (1823); *Schleg. Mus. P.-B.*, Anseres, p. 57 (1866); *Sclat. & Salv. Ibis*, 1870, p. 499 (Sandy Point); *Gieb. Thes. Orn.* i. p. 364 (1872); *Hartert, Kat. Vogelsamml.* p. 231 (Rio Grande, S. America) (1891).

Anas maculirostris, *Licht. Verz. Doubl.* p. 84 (Montevideo) (1823); *Sundev. P. Z. S.* 1871, p. 126 (Galapagos!).

Anas fretensis, *King, P. Z. S.* 1830, p. 15 (Magellan Straits).

Cyanopterus fretensis, *Eyt. Mon. Anat.* p. 131 (1838); *Jard. & Selb. Ill. Orn.* iv. pl. 29 (1838); *Fraser, P. Z. S.* 1844, p. 157.

Anas muralis, *Merrem in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 42 (1841).

Cyanopterus maculirostris, *Hartl. Verz. Ges. Mus.* p. 119 (1844).

Querquedula maculirostris, *G. R. Gr. List B. Brit. Mus.* iii. p. 138 (1844); *Des Murs in Gay, Hist. de Chile*, i. p. 452 (1848); *Hartl. Naumannia*, 1853, p. 222; *Licht. Nomencl. Av.* p. 102 (1854); *Phil. & Landb. Cat. Av. Chil.* p. 42 (1868); *Burm. P. Z. S.* 1872, p. 367; *id. An. Mus. Nac. Buen. Air.* iii. pp. 247, 320 (1888).

Pterocyanea maculirostris, *G. R. Gr. Gen. B.* iii. p. 617, n. 2 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. f. 181 (1845); *Hartl. Ind. Azar. Apunt.* p. 28, n. 440 (1847); *Rchnb. Syn. Av.* t. 90. f. 2344 (1850) (*ex Jard. & Selb.*); *Bibra, Denkschr. Akad. Wien*, v. 2, p. 132 (1853) (Chili); *id. J. f. O.* 1855, p. 57; *Pelz. Reise Novara, Vög.* p. 139 (Chili) (1865); *id. Orn. Bras.* p. 464 (1870).

Pterocyanea versicolor, *Bp. Compt. Rend.* xliii. p. 650, no. 91 (syn. emend.) (1856).

Querquedula versicolor, *Cass. U.S. Astron. Exp.* ii. p. 203 (Chili) (1856); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 161 (Falklands); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Sclat. & Salv. P. Z. S.* 1868, p. 146 (Buenos Ayres); *G. R. Gr. Hand-list*, iii. p. 83, n. 10659 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Salvin, Trans. Zool. Soc.* iv. p. 499 (1876); *Sclat. & Salv. P. Z. S.* 1876, p. 388; *Durnf. Ibis*, 1877, pp. 41 (Chuput). 191 (Buenos Ayres), 1878, p. 401 (Centr. Patag., resident); *Sclat. P. Z. S.* 1880, p. 522; *Milne-Edw. Rech. Faun. Rég. Austr.* ch. ix. p. 46 (1882); *Barrows, Auk*, 1884, p. 274 (Entrerios); *Berl. J. f. O.* 1887, p. 124 (Paraguay); *Sclat. Argent. Orn.* ii. p. 131 (1889); *Tristr. Cat. Coll. B.* p. 49 (1889); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 207 (1891); *Holland, Ibis*, 1892, p. 207 (Argentina); *Kerr. Ibis*, 1890, p. 358, 1892, p. 146 (Lower Pilcomayo); *Berkel. James,*

New List Chil. B. p. 9, n. 154 (1892); *Aplin, Ibis*, 1894, p. 200 (Uruguay).

Anas (Pterocyanea) maculirostris, *Burm. J. f. O.* 1860, p. 266 (Mendoza); *id. La Plata-Reise*, ii. p. 516 (1861).

Pterocyanea fretensis, *Eyt. Syn. Anat.* p. 85 (1869).

Adult male. Upper half of the head blackish brown; sides of the head and throat whitish buff; lower part of the neck buffish, minutely spotted with black; mantle and anterior scapulars black, the feathers edged with ochreous, and with a narrow bar of the same colour; lower back, rump, and upper tail-coverts with narrow white bars, which are more numerous on the latter; breast buffish, changing into white on the abdomen, each feather with a subapical spot and a bar black; lower abdomen and under tail-coverts white, with black bars, very narrow on the vent and central under tail-coverts; longer feathers of the flanks with white and black bars; longer scapulars brown, with a central buffish stripe; upper wing-coverts greyish brown, the greater row white at the tip, forming a white band anteriorly to the glossy green speculum on the secondaries; the speculum more or less changing into blue towards the posterior half and bounded by a subapical black band, and by a second white one at the tip of the secondaries; longer tertials brown; primaries brown; under wing-coverts greyish brown, the central ones and the axillaries white; tail brown-grey, freckled and waved with irregular narrow white bands: bill black, with an orange patch on each side at the base of the upper mandible; "legs and feet green, webs black; irides white" (*Durnford*). Total length about 16·5 inches, wing 7·5, tail 3·4, culmen 1·6, tarsus 1·1.

Female. Similar, but smaller, colour duller, and wing-speculum not so bright (*Sclater*).

Young. Speculum grey, with no metallic-green colour and no subapical black band.

Hab. Paraguay, Uruguay, Argentina, Chili, Patagonia, and Falklands; also Galapagos Islands (?).

a, *b*. ♂ ad. et ♀ juv. sk.	Province of Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Rio Bueno, Chili, Jan.	H. Berkeley James, Esq. [P.].
d. Ad. st.	Maldonado.	Sir W. Burnett & Capt. Fitzroy [P.].
e. Ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Buenos Ayres, May.	H. Durnford, Esq. [P.].
g. Ad. st.	Straits of Magellan.	The Admiralty [P.].
h. Juv. st.	Straits of Magellan.	Sir W. Burnett & Capt. Fitzroy [P.].
i. Ad. sk.	Falkland Is.	Tweeddale Coll.
k. Ad. sk.	Falkland Is.	Antarctic Exped. [C.].
l. Ad. sk.	Falkland Is.	E. A. Holmstead, Esq. [P.].
m. Ad. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.

2. Querquedula puna.

Anas puna, *Licht. Mus. Berol.*; *Tsch. Arch. f. Naturg.* 1844, i. p. 315, n. 347 (Peru); *id. Faun. Per., Aves*, p. 309 (1845–46); *Burm. Syst. Ueb. Thier. Bras.* iii. p. 439 (1869); *Gieb. Thes. Orn.* i. p. 360 (1872).

Querquedula puna, *G. R. Gr. Gen. B.* p. 616, n. 14 (1845); *Licht. Nomencl. Av.* p. 102 (1854); *Eyton, Syn. Anat.* p. 81 (1869); *Sclat. & Salv. P. Z. S.* 1869, p. 157 (Tungasuca); *iid. Evot. Orn.* p. 197, pl. 99 (1869); *iid. Nomencl. Av. Neotrop.* p. 129, n. 10 (1873); *Tacz. P. Z. S.* 1874, p. 554 (Junin); *Sclat. & Salv. P. Z. S.* 1876, p. 388; *Sclat. P. Z. S.* 1880, p. 522 (Andes of Peru and Bolivia); *Tacz. Orn. Pér.* iii. p. 478 (1886); *Sclat. P. Z. S.* 1886, p. 401 (Tarapacá); *Philippi, Ornis*, iv. p. 160 (Antofagasta) (1888); *Tristr. Cat. Coll. B.* p. 49 (1889); *Sclat. P. Z. S.* 1891, p. 136 (Tarapacá); *Berk. James, New List Chil. B.* p. 9, n. 156 (Tarapacá) (1892).

Punanetta leucogenys, "*Tsch.*" (errore), *Bp. Compt. Rend.* xliii. p. 649, n. 78 (1856).

Punanetta puna, *G. R. Gr. Hand-list*, iii. p. 84, n. 10673 (1871).

Adelonetta puna, *Heine, Nomencl. Mus. Hein. Orn.* p. 346 (1890).

Similar to *Q. versicolor*, but much larger, with longer and in dry skins uniform black bill; the upper half of the head deep black; cheeks and throat purer white; the bars on the flanks much narrower and less sharply defined; the lower back uniform brown-grey, with no whitish narrow bars: "bill light blue, with the ridge black; eyes dark hazel; legs and toes bluish lead-colour" (*Whitely*). Total length 19·5 inches, wing 8·5, tail 3·8, culmen 1·8–2·15, tarsus 1·3.

Female. Similar to the male, but somewhat smaller; the upper half of the head dark brown; the speculum less bright.

Young. Has the speculum grey, without any metallic green colour.

Hab. Andes of Peru, Bolivia, and Northern Chili.

a, *b*. Ad. sk.	Peru (*Jelski*).	Warsaw Museum [E.].
c. ♂ ad. sk.	Yunoca, Peru, March (*H. Whitely*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Laguna de Tungasuca, Peru, July (*H. W.*).	Salvin-Godman Coll.
e. ♀ ad. st.	Laguna de Tungasuca, July.	H. Whitely, Esq. [C.].
f. ♂ ad. st.	Laguna de Tangui, Peru.	H. Whitely, Esq. [C.].
g–t. Ad. et imm. sk.	Province of Tarapacá, Chili, Jan.–April.	H. Berkeley James, Esq. [P.].

3. Querquedula circia.

The Garganey.

Querquedula, *Briss. Orn.* vi. p. 427, pl. xxxix. ff. 1, 2 (♂ ♀) (1760).

Querquedula æstiva, *Briss. op. cit.* p. 445 (1760).

Anas querquedula, *Linn. S. N.* i. p. 203, n. 32 (1766); *Gm. S. N.* i. p. 531, n. 32 (1788); *Lath. Ind. Orn.* ii. p. 872, n. 99 (1790); *Bonn. Enc. Méth.* i. p. 153, pl. 39. f. 1 (1791); *Lath. Tr. Linn. Soc.* iv. p. 108, tab. xiii. ff. 2, 3 (trachea) (1798); *Pall. Zoogr. Rosso-*

As. ii. p. 264 (1811); *Temm. Man.* p. 545 (1815); *Vieill. N. D.* v. p. 166 (1816); *Dum. Dict. Sc. Nat.* vi. p. 389 (1817); *Temm. Man.* 2nd ed. ii. p. 844 (1820); *Boie, Isis,* 1822, p. 564; *Licht. Verz. Doubl.* p. 84 (1823); *Savi, Orn. Tosc.* iii. p. 151 (1831); *K. E. Abbott, P. Z. S.* 1834, p. 134 (Trebizond); *Temm. Man.* 2nd ed. iv. p. 539 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxiv, 226 (1840); *Naum. Vög. Deutschl.* xi. p. 677, Taf. 303 (1842); *Schleg. Rev. Crit.* p. cxiv (1844); *Midd. Sibir. Reis.* ii. p. 229 (1853); *Wallengr. Naumannia,* 1854, p. 272 (Scandinavia); *Bolle, J. f. O.* 1855, p. 365 (Spain); *Blyth, Ibis,* 1859, p. 464 (Lower Bengal); *Finsch, J. f. O.* 1859, p. 387 (Bulgaria); *Powys, Ibis,* 1860, p. 353 (Ionian Isls.); *Simps. ibid.* pp. 341, 394 (Greece); *Swinh. P. Z. S.* 1863, p. 324 (China); *Nordm. J. f. O.* 1864, p. 377 (Kuopio); *Droste, ibid.* p. 428 (Borkum); *Schleg. Mus. P.-B.,* Anseres, p. 49 (Philippines) (1866); *Przew. Voy.* n. 202 (1867); *Dyb. & Parr. J. f. O.* 1868, p. 338 (Dauria); *Przew. Putesch. Ussur.* n. 202 (1870); *Saund. Ibis,* 1871, p. 396 (Southern Spain); *Gieb. Thes. Orn.* i. p. 360 (1872); *Tayl. Ibis,* 1872, p. 233 (Crimea); *Severtz. Turk. Jevotn.* p. 70 (1873); *Rosenb. Reist. naar Geelvinkb.* p. 9 (Ternate!) (1875); *Blyth, B. of Burma,* p. 166 (Arakan, Tenasserim) (1875); *Salvad. Orn. Pap. e Mol.* iii. p. 400 (Ternate?) (1882); *Rchnw. J. f. O.* 1892, p. 82; *Hartert, Kat. Vogelsamml.* p. 231 (Abyssinia) (1891).

Anas circia, *Linn. S. N.* i. p. 204, n. 34 (1766); *Gm. S. N.* i. 2, p. 533, n. 34 (1788); *Bonn. Enc. Méth.* i. p. 155 (1791); *Vieill. N. D.* v. p. 166 (1816); *Dum. Dict. Sc. Nat.* vi. p. 592 (1817); *Less. Tr. d'Orn.* p. 634 (1831); *Legge, B. of Ceyl.* p. 1080 (1880); *Scully, Ibis,* 1881, p. 593; *Tristr. Faun. & Flor. of Palest.* p. 116 (1884); *Seeb. Hist. Brit. B.* iii. p. 551, pl. 66 (egg) (1885); *Lilford, Col. Fig. Brit. B.* pt. xiii. pl. — (1890).

Garganey, *Penn. Brit. Zool.* ii. p. 604, n. 289, t. 101 (1776); *Lath. Syn.* iii. 2, p. 550, n. 87 (1785).

Mestolone femmina (*errore*), *Gerini, Stor. degli Ucc.* v. t. 573 (♂) (1776).

Anatra querquedula, o Arzagola, *Gerini, op. cit.* t. 595 (♀) (1776).

Sarcelle, *D'Aubent. Pl. Enl.* 946; *Buff. Hist. Nat. Ois.* ix. p. 260 (1783).

Sarcelle d'été, *Buff. op. cit.* p. 268 (1783).

Summer Teal, *Lath. Syn.* iii. 2, p. 552, n. 89 (1785).

Anas balbul, *Gm. S. N.* i. p. 543, n. 124 (1788) (*ex Forsk. Descr. An.* p. 4, n. 12, 1775).

Anas crecca, var. *β*, *Lath. Ind. Orn.* ii. p. 873 (1790).

Anas crecca, var. *δ*, *Lath. Ind. Orn.* ii. p. 874 (1790).

Querquedula circia, *Steph. Gen. Zool.* xii. 2, p. 143, pl. 51 (1824); *Boie, Isis,* 1828, p. 329; *Sykes, P. Z. S.* 1832, p. 169, n. 221 (Dukhun); *Gould, B. Eur.* pl. 364 (1837); *Dicks. & Ross, P. Z. S.* 1839, p. 134 (Erzeroom); *Strickl. Ann. & Mag. N. H.* viii. p. 545 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 137 (1844); *Rüpp. Syst. Uebers.* p. 138, n. 495 (Egypt) (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 305, n. 1781 (1849); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (Ceylon) (1854); *Adams, P. Z. S.* 1858, p. 510; *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Swinh. Ibis,* 1863, p. 434 (Formosa); *Jerd. B. of Ind.* iii. p. 807 (1864); *Gould, B. of Great Brit.* v. pl. 17 (pt. viii., 1865); *Degl. & Gerbe, Orn. Eur.* ii. p. 518 (1867); *Swinh. Ibis,* 1867, p. 407 (Amoy); *id. P. Z. S.* 1870, p. 427, 1871, p. 418 (China, Formosa); *Elw. & Buckl. Ibis,* 1870, p. 340 (Turkey); *G. R. Gr. Hand-list,* iii. p. 83, n. 10656 (1871); *Sharpe & Dress.*

B. Eur. vi. p. 513, pl. 429 (pt. 5, 1871); *Tristr. Ibis*, 1872, p. 296 (Palestine); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Wald. Tr. Z. S.* viii. p. 102 (Celebes) (1872); *Shell. B. of Egypt*, p. 287 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1320 (1873); *Hume, Nests & Eggs*, p. 644 (1873); *Dyb. J. f. O.* 1874, p. 337; *Salvad. Cat. Ucc. Born.* p. 361 (Borneo?) (1874); *Hume, Str. Feath.* iii. p. 193 (Pegu) (1875); *Dress. Ibis*, 1876, p. 419; *Scully, Str. Feath.* iv. p. 201 (E. Turkestan) (1876); *Blanf. East. Pers.* ii. p. 301 (1876); *David & Oust. Ois. Chine*, p. 502 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 103 (Mongolia) (1878); *Blak. & Pryer, Ibis*, 1878, p. 214; *Hume & Davis. Str. Feath.* vi. p. 489 (Tenasserim) (1878); *Cripps, Str. Feath.* vii. p. 312 (E. Bengal) (1878); *Hume, Str. Feath.* viii. p. 115, n. 965 (1879); *Scully, ibid.* p. 363 (Nepal); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 263 (W. Siberia); *Tirant, Bull. Com. Agr. et Industr.* i. 1 (1878), p. 161 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 215, pl. 28 (1880); *Bingh. Str. Feath.* ix. p. 198 (1880); *Sclat. P. Z. S.* 1880, p. 520; *Blak. & Pryer, Tr. As. Soc. Jap.* viii. p. 185 (1880), x. p. 98 (1882); *Bidd. Ibis*, 1881, p. 100; *C. Swinh. Ibis*, 1882, p. 125; *Oates, Str. Feath.* x. p. 245 (Pegu) (1882); *Salv. Cat. B. Strickl. Coll.* p. 535 (1882); *Severtz. Ibis*, 1883, p. 76 (Pamir range); *Nichols. Ibis*, 1883, p. 86 (Borneo); *B. O. U. List Brit. B.* p. 126 (1883); *Sclat. List Vert. An.* 8th ed. p. 434 (1883); *Oates, B. Brit. Burm.* ii. p. 286 (1883); *Blakist. Amend. List B. Jap.* p. 34 (1884); *Seeb. Ibis*, 1884, p. 175; *Stejn. Naturen*, 1884, p. 9; *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 247 (Shoa) (1884); *Vorderm. N. T. N. I.* xliv. p. 253 (Java) (1884); *Madar. Zeitschr. d. ges. Orn.* i. p. 37 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 393 (1884–85); *Bachet, Le Natural.* 1885, p. 36; *Menzb. Ibis*, 1885, p. 358; *Sharpe, Ibis*, 1886, p. 493 (Fao); *Blas. Zeitschr. d. ges. Orn.* iii. p. 171 (Celebes) (1886); *Salvad. El. Ucc. Ital.* p. 261 (1886); *Vorderm. N. T. N. I.* xlvi. p. 240 (1886); *Tait, Ibis*, 1887, p. 372 (Portugal); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 321 (Shoa) (1888); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 137 (China) (1888); *Everett, Journ. Str. Br. R. As. Soc.* 1889, p. 192 (Borneo); *Tristr. Cat. Coll. B.* p. 49 (1889); *Saunders, Man. Brit. B.* p. 423 (1889); *Vorderm. N. T. N. I.* xlix. p. 419 (1889); *Hume, Nests & Eggs (Oates' ed.)*, iii. p. 291 (1890); *Steere, List Philipp. B. & M.* p. 27 (Luzon) (1890); *Evans, Ibis*, 1892, p. 73 (incubation); *Sharpe, Sec. Yark. Miss., Aves*, p. 131 (1891); *De la Touche, Ibis*, 1892, p. 492 (China); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 448, pl. 257 (1892); *Barnes, Ibis*, 1893, p. 174 (Aden); *Styan, ibid.* p. 435 (Hainan); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 564 (Somali) (1894).

Querquedula glaucopterus, *Brehm, Isis*, 1830, p. 997; *id. Vögel Deutschl.* p. 882 (1831).

Querquedula scapularis, *Brehm, Isis*, 1830, p. 997; *id. Vögel Deutschl.* p. 883 (1831).

Boschas circia, *Sw. Class. B.* ii. p. 367 (1837); *Jerd. Madr. Journ.* xii. p. 220, n. 383 (1840).

Cyanopterus circia, *Eyt. Mon. Anat.* p. 130, pl. ii. f. 3 (trachea) (1838); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 146 (1846).

Pterocyanea circia, *Bp. Icon. Faun. Ital., Ucc. Introd.* p. 17 (1841); *id. Cat. Met. Ucc. Eur.* p. 71 (1842); *G. R. Gr. Gen. B.* iii. p. 617, n. 1 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 183–185 (1845); *id. Av. Syst. Nat.* p. ix (1852); *Bolle, J. f. O.* 1855, p. 314 (Albufera); *Salv. Ibis*, 1859, p. 363 (E. Atlas); *Hartm. J. f. O.* 1863, p. 309 (South of Dongola); *More, Ibis*, 1865, p. 443 (Great Brit.);

Eyt. Syn. Anat. p. 84 (1869); *Tacz. J. f. O.* 1870, p. 55 (Constantina).

Anas (Querquedula) humeralis, *S. Müll. Verh. Land- en Volkenk.* p. 159 (Java) (1839–44).

Querquedula vulgaris, *Hodgs. in Gray's Zool. Misc.* p. 86, n. 767 (1844).

Cyanopterus querquedula, *Hartl. Verz. Ges. Mus.* p. 119 (1844); *Heugl. Syst. Uebers.* n. 692 (1855); *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872): *v. Koch, J. f. O.* 1872, p. 139; *Alst. & H.-Brown, Ibis*, 1873, p. 71.

Querquedula humeralis, *G. R. Gr. Gen. B.* iii. p. 616, n. 13 (1845); *Bp. Compt. Rend.* xliii. p. 616, n. 98 (1856).

Pterocyanea querquedula, *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 93 (1856); *Dyb. J. f. O.* 1873, p. 110; *Tacz. Bull. Soc. Zool. Fr.* ii. p. 46 (1877); *id. Orn. Faun. Yost. Sibir.* p. 70 (1877); *Heugl. Faun. Roth. Meer.* n. 286 (1881); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 343 (1883); *Dyb. & Tacz. op. cit.* ix. p. 147 (Bering I.) (1884).

Pterocyanea glaucopteros, *Brehm, Vogelf.* p. 374 (1855); *id. Naumannia*, 1855, p. 298.

Pterocyanea scapularis, *Brehm, Vogelf.* p. 374 (1855); *id. Naumannia*, 1855, p. 298.

Anas glaucoptera, *C. F. Dub. Pl. Col. Ois. Belg.* iii. p. 274 (1860).

Anas (Cyanopterus) querquedula, *Radde, Reis. S. O.-Sib.* iii. p. 370 (1863).

Querquedula numeralis (*errore*), *Jerd. B. of Ind.* iii. p. 808 (1864).

Querquedula querquedula, *Baird, Am. Journ. of Sc. & Arts*, xli. p. 339 (1866); *id. Ibis*, 1867, p. 283; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 156 (Kamschatka) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 136 (note) (1887).

Anas pterocyanea, *Goeldlin, J. f. O.* 1879, p. 382 (Schaffhausen).

Anas (Querquedula) circia, *Rchnw. Orn. Centralbl.* 1882, p. 20; *id. Vög. zool. Gärt.* p. 55 (1882).

Cyanopterus querquedulus (!), *Radde, Ornis Cauc.* p. 457 (1884).

Adult male. Upper part of the head and occiput brown-black; from above the eyes, on each side of the head, a whitish band, extending to the sides of the occiput; sides of the head and upper part of the neck chocolate-brown, streaked with white; chin black; back, rump, and upper tail-coverts blackish, each feather edged with greyish olive; scapulars elongated and pointed, black, with a central stripe of white; breast with brown and black crescentic bands, producing a scaly-like appearance; lower breast white; abdomen, sides, and flanks white, waved with narrow black lines; longer feathers of the flanks bounded by a subapical white band, and a bluish-grey band at the tip; sides of the rump and under tail-coverts whitish, with black spots; upper wing-coverts and outer scapulars bluish grey; wing-speculum on the secondaries glossy green, bounded anteriorly by a white band formed by the greater wing-coverts, and posteriorly by another white band at the tip of the secondaries; primaries and tail-feathers brown, the latter edged with whitish; under wing-coverts dark grey, the central ones, like the axillaries, white: bill black, irides hazel; legs, toes, and their membranes greyish brown. Total length about 16 inches, wing 7·75, tail 2·75, culmen 1·62, tarsus 1·2.

Female. General colour of the upper parts dark brown, each feather with a pale margin; broad superciliary stripe whitish; a dusky band behind the eyes; sides of the head and neck whitish, streaked with black; chin and throat white; feathers of the lower fore neck blackish, with whitish edges; breast and abdomen white; sides, vent, and under tail-coverts white, with brown-black spots; wings greyish brown; a dull metallic-green speculum, bounded anteriorly and posteriorly by two white bands; under wing-coverts brown, margined with white, the greater ones pure grey, the central ones, like the axillaries, white. Size smaller than that of the male.

Young in first plumage resemble the females, but are darker and more suffused with rufous on the breast.

Adult males in moulting plumage closely resemble adult females, but are darker in colour, and may be distinguished by the brighter alar speculum (*Seebohm*).

Downy nestling resembles that of the Mallard, but it is smaller, and has a broad unbroken buff streak above the eye, and a well-defined dark streak through the eye (*Yarrell*).

Hab. Palæarctic Region, wintering in Northern Africa as far south as Shoa and Somali-land, in Palestine, India with Ceylon, in Burmah, China, Japan, Philippines, Borneo, Java, Celebes, Ternate, and Ceram.

a, *b*. ♂ ♀ ad. sk.	England, March.	Salvin-Godman Coll.
c. ♂ ad. st.	Norfolk, Feb.	
d. ♂ ad. sk.	Rockland, Norfolk, Sept.	Seebohm Coll.
e. ♂ ad. sk.	Norwich, March.	H. J. Elwes, Esq. [P.].
f. ♂ ad. sk.	Suffolk.	Tweeddale Coll.
g. ♂ ad. sk.	Somersetshire.	Montagu Coll.
h, *i*. ♂ ♀ ad. sk.	Shoreham, Kent, March.	Seebohm Coll.
k–*n*. ♂ ad. sk.	Egypt, April.	Shelley Coll.
o, *p*. ♂ ♀ ad. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
q, *r*. ♂ ♀ ad. sk.	Fao, Persian Gulf.	W. D. Cumming, Esq. [P.].
s–*v*. ♂ ♀ ad. sk.	Omsk, May.	St. George Littledale, Esq. [P.].
w. ♂ ad. sk.	Pamir.	Colonel J. Biddulph [P.].
x, *y*. ♂ ♀ ad. sk.	Yarkand.	Dr. R. Bowdler Sharpe [P.].
z. ♂ ad. sk.	Kandahar, March.	Lt.-Col. Swinhoe [P.].
a'. ♀ ad. sk.	Gilgit, Sept.	Colonel J. Biddulph [P.].
b'. ♀ ad. sk.	Leh, Sept. (*F. Stoliczka*).	India Museum [P.].
c', *d'*. ♂ ♀ imm. st.	India.	Purchased.
e'. ♂ imm. sk.	Ahmedabad, Dec.	Seebohm Coll.
f'. ♀ ad. sk.	Karachi, Dec. (*E. A. Butler*).	Hume Coll.
g', *h'*. ♂ ad. sk.	Sambhur, March, April (*R. M. Adam*).	Hume Coll.
i'–*r'*. ♂ ♀ ad. sk.	Gurgaon, Delhi, April, May (*W. N. Chill*).	Hume Coll.
s', *t'*. ♂ ad. et imm. sk.	Sultanpur, Gurgaon, Jan., March, Dec.	Hume Coll.

u'. ♂ juv. sk.	Raipur, C. Provinces.	Hume Coll.
v', *w'*. ♂ imm. sk.	Etawah.	Hume Coll.
x', *y'*, *z'*. ♂ ad. sk.	Futtehgurh, March, May (*A. Anderson*).	Seebohm Coll.
a''. ♂ imm. sk.	Kheree Dist., Feb. (*A. A.*).	Seebohm Coll.
b''–e''. ♂ ad. sk.	Allahabad, March (*A. O. H.*).	Hume Coll.
f''. ♀ ad. sk.	Oudh, Jan.	Hume Coll.
g'', *h''*, *i''*. ♂ ♀ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
k''. ♀ ad. sk.	Hills N. of Mussorie.	Hume Coll.
l''–r''. ♂ ♀ ad. et juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
s'', *t''*, *u''*. ♂ ♀ imm. et juv. sk.	Nepal (*Hodgson*).	India Museum [P.].
v''. ♂ juv. sk.	Darjeeling.	India Museum [P.].
w''–a^3. ♂ ♀ ad. et ♂ juv. sk.	Native Sikhim, March, Oct. (*L. Mandelli*).	Hume Coll.
b^3. ♀ ad. sk.	Assam (*McClelland*).	India Museum [P.].
c^3. ♂ ad. sk.	Manipur (*A. O. H.*).	Hume Coll.
d^3, *e*^{3}. ♀ ad. sk. et semi-albino variety.	Calcutta, Feb. (*A. O. H.*).	Hume Coll.
f^3, *g*^{3}, *h*^{3}. ♂ ad. et imm. sk.	Deccan (*Sykes*).	India Museum [P.].
i^3. ♂ ad. sk.	Madras.	Tweeddale Coll.
k^3–*n*^{3}. ♀ ad. sk.	Tonghoo, Oct., Dec. (*R. G. W. R.*).	Tweeddale Coll.
o^3. ♀ ad. sk.	Pegu, Sept.	E. W. Oates, Esq. [C.].
p^3, *q*^{3}, *r*^{3}. ♂ ad. et ♀ imm. sk.	Lower Pegu, March, Oct.	E. W. Oates, Esq. [C.].
s^3–*v*^{3}. ♀ ad. et ♂ juv. sk.	Kadaikeglay, near Thatone, Dec. (*W. Davison*).	Hume Coll.
w^3, *x*^{3}. ♂ ad. sk.	Cochin China.	M. St. Pierre [P.].
y^3. ♂ ad. sk.	Lob-nor, March (*Prjevalsky*).	Seebohm Coll.
z^3. ♂ ad. sk.	China.	J. Webb, Esq. [P.].
a^4. ♀ juv. sk.	China (*Tuckett*).	Tweeddale Coll.
b^4. ♀ ad. sk.	Shanghai, China, April.	F. W. Styan, Esq. [P.].
c^4, *d*^{4}. ♂ ♀ ad. sk.	Shanghai, March (*R. Swinhoe*).	Seebohm Coll.
e^4. ♂ ad. sk.	N. Formosa, March (*R. S.*).	Seebohm Coll.
f^4. ♂ imm. sk.	Yokohama, Japan.	Seebohm Coll.
g^4. ♂ ad. sk.	Nagasaki, Japan, March.	J. Ringer, Esq. [P.].
h^4. ♀ ad. sk.	Baram, N.W. Borneo.	C. Hose, Esq. [C.].
i^4, *k*^{4}. ♀ ad. sk.	Labuan, Nov.	A. H. Everett, Esq. [P.].
l^4, *m*^{4}. ♂ ♀ imm. sk.	Menado, N. Celebes.	Tweeddale Coll.
n^4, *o*^{4}. ♂ ad. sk. et ♀ ad. st.	Ceram.	A. R. Wallace, Esq. [C.].
p^4. Skeleton.	England.	Purchased.
q^4. Sternum.	England.	T. Ingall, Esq. [P.].
r^4. Sternum.	England.	J. Ray, Esq. [P.].
s^4, *t*^{4}. Skulls.		

Hybrid.

Querquedula circia × *Spatula clypeata.*

u^4. ♂ st.	Kept in confinement.	Zool. Soc.

4. Querquedula discors.

Querquedula americana variegata, *Catesb. Carol.* i. p. 100, t. 100 (♂) (1754).
Querquedula americana fusca, *Catesb. Carol.* i. p. 99, t. 99 (♀) (1754).
Querquedula americana, *Briss. Orn.* vi. p. 453 (1760).
Querquedula virginiana, *Briss. Orn.* vi. p. 455 (1760).
Anas discors, *Linn. S. N.* i. p. 205, n. 37 (1766) (*ex Catesby*); *Gm. S. N.* i. 2, p. 535, n. 37 (1788); *Lath. Ind. Orn.* ii. p. 854, n. 55 (1790); *Bonn. Enc. Méth.* i. p. 156, pl. 41. f. 2 (♀) (1791); *Wils. Am. Orn.* viii. p. 74, pl. 68. f. 4 (1814); *Vieill. N. D.* v. p. 175 (1816); *Dum. Dict. Sc. Nat.* vi. p. 399 (1817); *Bp. Obs. Wils.* n. 262 (1825); *id. Syn.* p. 385 (1828); *Licht. Preis-Verz. mexic. Vög.* p. 3 (1830); *Wagl. Isis*, 1831, p. 532 (Mexico); *Less. Tr. d'Orn.* p. 634 (Cayenne!) (1831); *Aud. Orn. Biogr.* iv. p. 111, pl. 313 (1838); *id. Syn.* p. 282 (1839); *D'Orb. in La Sagra's Hist. Nat. Cuba, Ois.* p. 294 (1840); *Aud. B. Am.* vi. p. 287, pl. 393 (1843); *Giraud, B. Long Isl.* p. 315 (1844); *DeKay, N. Y. Zool.* ii. p. 339 (1844); *Licht. J. f. O.* 1863, p. 59 (Mexico); *Schleg. Mus. P.-B.*, Anseres, p. 50 (1866); *Sundev. Œfv. K. Vet.-Ak. Förh.* 1869, p. 591 (St. Bartholomew), p. 603 (Porto Rico); *Trippe, Pr. Ess. Inst.* vi. p. 119 (Minnesota) (1871); *Gieb. Thes. Orn.* i. p. 350 (1872); *Seeb. Hist. Brit. B.* iii. p. 551 (1885); *A. O. U. Check-list N. Am. B.* p. 116, n. 140 (1886); *Turner, Contr. N. H. of Alaska*, p. 133 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 69 (1887); *Ridgw. Man. N. Am. B.* p. 93 (1887); *Winge, Ornis*, 1888, p. 412 (Säby, Denmark); *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Hatch, B. of Minnes.* p. 45 (1892); *Chapm. Bull. Amer. Mus. N. H.* 1894, p. 83 (Trinidad).
Sarcelle de Cayenne, ditte la Soucrourou, *D'Aubent. Pl. Enl.* 966 (♂), 403 (♀).
Sarcelle Soucrourou, *Buff. Hist. Nat. Ois.* ix. p. 279 (♂) (1783).
Sarcelle Soucrourette, *Buff. op. cit.* p. 280 (♀) (1783).
White-faced Duck, *Lath. Syn.* iii. 2, p. 502, n. 50 (1785).
Querquedula discors, *Steph. Gen. Zool.* xii. 2, p. 149 (1824); *Boie, Isis*, 1828, p. 329; *G. R. Gr. List B. Brit. Mus.* iii. p. 138 (1844); *Sclat. P. Z. S.* 1857, p. 206 (Jalapa); *Sallé, P. Z. S.* 1857, p. 237 (S. Domingo); *Baird, B. N. Am.* p. 779 (1858); *id. Mex. B. Surv.* p. 26 (1859); *id. Cat. N. Am. B.* n. 591 (1859); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *Sclat. P. Z. S.* 1859, p. 393 (Oaxaca); *Sclat. & Salv. Ibis*, 1859, p. 231 (Guatemala); *Sclat. P. Z. S.* 1860, p. 254 (Orizaba); *Coop. & Suckl. N. H. Wash. Terr.* p. 254 (1860); *Sclat. P. Z. S.* 1861, p. 82 (Jamaica); *Blakist. Ibis*, 1862, p. 9 (Brit. N. Amer.); *Ross, Canad. Nat.*, April 1862; *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Hayd. Rep.* 1862, p. 176; *Blakist. Ibis*, 1863, p. 146; *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica); *Lawr. Ann. Lyc. N. Y.* viii. p. 101 (Sombrero) (1864), p. 297 (1866); *Salv. Ibis*, 1865, p. 193 (Guatemala); *Dresser, Ibis*, 1866, p. 43 (Texas, breeding); *Gundl. Rep. Fis.-Nat. Cuba*, i. p. 389 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 520 (1867); *Coues, Pr. Ess. Inst.* v. p. 299 (1868); *Sclat. & Salv. P. Z. S.* 1869, p. 252 (Valencia, Venezuela); *Lawr. Ann. Lyc. N. Y.* ix. p. 143 (Costa Rica) (1868); *Dall & Bann. Tr. Chic. Acad.* i. p. 297 (Alaska, breeding) (1869); *Pelz. Orn. Bras.* p. 460 (Brazil!) (1870); *Salv. P. Z. S.* 1870, p. 219 (Veragua); *G. R. Gr. Hand-list*, iii. p. 83, n. 10659 (1871); *Allen, Bull. Mus. Comp. Zool.* iii. p. 183 (Kansas) (1872); *Aiken, Pr. Bost.*

Soc. xv. p. 210 (Colorado) (1872); *Trippe, ibid.* p. 241 (Iowa) (1872); *Coues, Key*, p. 287 (1872); *id. Check-list*, n. 496 (1873); *Snow, B. Kansas*, p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Coues, Birds N.-West*, p. 566 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 314 (Mexico) (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 380 (Cuba); *Sclat. & Salv. P. Z. S.* 1876, p. 383; *Gundl. An. Soc. Esp. Hist. Nat.* vii. p. 404 (Porto Rico) (1878); *Sclat. & Salv. P. Z. S.* 1879, p. 543 (Medellin); *Cory, B. Bahama I.* p. 186 (1880); *Sclat. P. Z. S.* 1880, p. 521; *Ridgw. Nom. N. Am. B.* n. 609 (1881); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Salv. Cat. B. Strickl. Coll.* p. 535 (1882); *Coues, Check-list*, 2nd ed. n. 716 (1882); *B. O. U. List Brit. B.* p. 126 (1883); *Coues, Key N. Am. B.* 2nd ed. p. 696 (1884); *B., B., & R., Water-B. N. Am.* i. p. 531 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 392 (1884); *Matsch. & Ziemer, J. f. O.* 1885, p. 191; *Cory, B. Haiti and San Domingo*, p. 168 (1885); *id. List Birds W. I.* p. 31 (1885); *Wells, List B. Grenada*, p. 10 (1886); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (Venezuela) (1887); *Cory, Auk*, 1888, p. 63; *id. B. W. Ind.* p. 264 (1889); *Salv. Ibis*, 1889, p. 377 (Cozumel); *Feild. ibid.* p. 590 (Barbados); *Tristr. Cat. Coll. B.* p. 49 (1889).

Anas (Boschas) discors, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 444 (1831); *Nutt. Man.* ii. p. 397 (1834).

Boschas discors, *Sw. Class. B.* ii. p. 367 (1837); *Denny, P. Z. S.* 1847, p. 40.

Cyanopterus discors, *Eyt. Mon. Anat.* p. 131 (1838); *Bp. Comp. List*, p. 57 (1838); *Gosse, B. Jam.* p. 401 (1847); *Cab. & Gundl. J. f. O.* 1857, p. 228; *Sclat. P. Z. S.* 1860, p. 83 (Ecuador); *Taylor, Ibis*, 1860, p. 315 (Tigré Island); *Blas. B. Eur.* p. 21 (France) (1862); *Gundl. J. f. O.* 1871, p. 289.

Pterocyanea discors, *G. R. Gr. Gen. B.* iii. p. 617, n. 3 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. ff. 176–177 (1845); *Bp. Compt. Rend.* xlii. p. 664 (Nicaragua) (1853); *Woodh. Sitgr. Rep.* p. 103 (1853); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 90 (1856); *Newb. P. R. R. Rep.* vi. p. 103 (1857) (California and Oregon, may rather refer to *Q. cyanoptera*); *Bp. Rev. et Mag. de Zool.* 1857, p. 62 (Manche); *Moore, P. Z. S.* 1859, p. 64 (Honduras); *Brew. Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1861); *Léot. Ois. Trinid.* p. 516 (1866); *Eyt. Syn. Anat.* p. 86 (1869); *Frantz. J. f. O.* 1869, p. 378 (Costa Rica).

Cyanopterus inornatus, *Gosse, B. Jam.* p. 402 (♀) (1847); *id. Jamaica Ill.* pl. cxi. (1849); *Sclat. P. Z. S.* 1861, p. 82 (? = Q. discors); *Albrecht, J. f. O.* 1862, p. 206.

Pterocyanea inornata, *G. R. Gr. Gen. B.* App. p. 28 (1849); *Rchnb. Syn. Av.*, Natatores, t. 87. f. 2556 (1850) (*ex Gosse, Ill.*); *Bp. Compt. Rend.* xliii. p. 650, n. 89 (1856); *Eyt. Syn. Anat.* p. 84 (1869).

Querquedula clypeata (*errore*), *Albrecht, J. f. O.* 1862, p. 207 (Jamaica).

Querquedula inornata, *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica); *A. & E. Newt. Handb. Jam.* p. 113 (1881).

Anas (Querquedula) discors, *Bryant, Pr. Bost. Soc. N. H.* xi. p. 97 (San Domingo) (1867) *.

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* The following synonyms seem also to belong to *Q. discors*:—

Querquedula mexicana, *Briss. Orn.* vi. p. 458, n. 37 (1766) (*ex* Toltecoloctli, *Hern. Hist. Nov. Hisp.* p. 36, Cap. cv.).

Adult male. Head and upper part of the neck dull plumbeous, slightly glossed with green on the occiput and nape, and marked in front of the eyes by a large crescentic band of white, extending from the sides of the forehead to the sides of the throat; pileum and chin blackish; back and anterior scapulars dusky, marked with U-shaped bars of pale reddish buff; rump and upper tail-coverts blackish, with lighter edges; lower parts pale reddish, thickly spotted with black; under tail-coverts black; a white patch at the base of the tail on each side; longer scapulars black, with a central stripe of buff; lesser wing-coverts and outer webs of some of the outer scapulars pale blue; greater coverts white, forming a bar anteriorly to the wing-speculum on the secondaries, which is glossy green; the tips of the secondaries bluish black; primaries and tail-feathers blackish brown; under wing-coverts dusky bluish, the central ones and axillaries white: bill uniform black; iris brown; feet yellowish. Total length about 16 inches, wing 7·5, tail 3·25, culmen 1·75, tarsus 1·2.

Female. Upper parts dusky, the feathers bordered with whitish buff; pileum blackish; sides of the head and upper neck dull whitish, minutely streaked with blackish, the streaks more dense before and behind the eye, forming an indistinct dusky stripe; the throat almost immaculate; feathers of the underparts dusky, with broad whitish edges and irregular bars, the bars more of a V-shape on the flanks; no light stripes along the centre of the longer scapulars; wings as in the male, but the green speculum much duller, and the white band formed by the tip of the last row of upper wing-coverts narrower.

Males moulting, similar to the females, but the wings of a brighter colour, and the markings of the feathers better defined.

Young. Similar to the adult female, but whole belly immaculate, and speculum dull greyish brown, without metallic gloss.

Hab. North America, but chiefly east of Rocky Mountains; in winter West Indies and Middle America, south to Columbia, Ecuador, and Peru.

a. ♂ ad. sk.	No locality.	Purchased.
b. ♂ ad. sk.	N. America.	Capt. Kellett and Lieut. Wood [P.].
c. ♂ ad. st.	Repulse Bay.	Dr. J. Rae [P.].
d. ♂ ad. sk.	W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
e. ♀ ad. sk.	Hudson's River.	Tweeddale Coll.

Sarcelle du Mexique, *Buff. Hist. Nat. Ois.* ix. p. 285 (1783).
Mexican Duck, *Lath. Syn.* iii. 2, p. 539, n. 78 (1785).
Anas novæ hispaniæ, *Gm. S. N.* i. p. 525, n. 94 (1788); *Lath. Ind. Orn.* ii. p. 868, n. 89 (1790); *Bonn. Enc. Méth.* i. p. 160 (1791); *Vieill. N. D.* v. p. 173 (1816); *Dum. Dict. Sc. Nat.* vi. p. 400 (1817); *Wagl. Isis*, 1831, p. 532 (=discors).
Querquedula novæ hispaniæ, *Steph. Gen. Zool.* xii. 2, p. 153 (1824).
Pterocyanea novæ hispaniæ, *G. R. Gr. Gen. B.* iii. p. 617, n. 5 (1845); *Bp. Compt. Rend.* xliii. p. 650, n. 88 (1856).

f–i. ♂ ♀ ad. et ♀ imm. sk.	Fort Dufferin, June.	Brit. N. Amer. Bound. Comm. [P.].
k. ♂ juv. sk.	Warner Lake, Oregon, Sept.	Salvin-Godman Coll.
l. ♂ ad. st.	Missouri Brakes, Montana, April.	E. S. Cameron, Esq. [P.].
m, n. ♀ ad. et pull. sk.	Washoe Lake, Nevada, May, June.	Salvin-Godman Coll.
o. ♀ ad. sk.	Ontonago, Michigan, Sept. (*A. J. Dayan*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Gibson, Indiana, April (*W. Brewster*).	Salvin-Godman Coll.
q. ♂ juv. sk.	New Haven, Sept. (*A. J. Dayan*).	Salvin-Godman Coll.
r, s. Ad. sk.	Bermudas, Oct.	Capt. S. G. Reid [C.].
t, u. ♂ ♀ ad. sk.	Florida, March (*C. J. Maynard*).	Salvin-Godman Coll.
v–y. ♀ ad. et ♂ juv. sk.	Tarpon Springs, Florida, Oct. (*W. E. D. Scott*).	Salvin-Godman Coll.
z, a'. ♂ ♀ ad. sk.	Texas.	Salvin-Godman Coll.
b'. ♂ ad. sk.	San Antonio, Texas, April (*H. E. Dresser*).	Salvin-Godman Coll.
c'–f'. ♂ ♀ ad. sk.	Corpus Christi, Texas, Jan., Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
g'–l'. ♂ ♀ ad. sk.	Brownsville, Texas, March (*F. B. A.*).	Salvin-Godman Coll.
m'. ♀ ad. sk.	Weaversville, N. California, Sept. (*J. S. Cairns*).	Salvin-Godman Coll.
n'. ♂ ad. sk.	Mexico.	Salvin-Godman Coll.
o', p'. ♂ ad. et ♀ imm. sk.	Tamesi, near Tampico, Mexico, March (*W. B. Richardson*).	Salvin-Godman Coll.
q', r', s'. ♀ ad. et ♂ imm. sk.	Presidio, Mexico, Jan. (*A. Forrer*).	Salvin-Godman Coll.
t'. ♀ ad. sk.	Ciudad Durango, Mexico, Aug. (*A. Forrer*).	Salvin-Godman Coll.
u'. ♂ ad. sk.	Mugeres I., Yucatan, Feb. (*G. F. Gaumer*).	Salvin-Godman Coll.
v', w'. Ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
x', Ad. sk.	Dueñas, Guatemala (*O S.*).	H. J. Elwes, Esq. [P.].
y'. Ad. sk.	Dueñas, Guatemala, Nov. (*O. S.*).	Tweeddale Coll.
z'. ♂ juv. sk.	Coban, Guatemala, Jan. (*O. S.*).	Salvin-Godman Coll.
a''. ♂ juv. sk.	San José, Costa Rica, May (*M. L. Calleja*).	Salvin-Godman Coll.
b''. ♂ juv. sk.	Costa Rica (*Endres*).	Salvin-Godman Coll.
c''. ♂ juv. sk.	Laguna de Castillo, Veragua (*Arcé*).	Salvin-Godman Coll.
d''. ♂ ad. st.	S. America.	Purchased.
e''. [♀ ad.] sk.	Medellin, U.S. of Columbia, (*T. K. Salmon*).	Salvin-Godman Coll.
f''. Ad. sk.	Vicinity of Bogota (*G. Crowther*).	Salvin-Godman Coll.

g''. ♂ ad. sk.	Lima, Peru (*Nation*).	Salvin-Godman Coll.
h''. ♀ ad. st.	Jamaica, W. Indies.	P. H. Gosse, Esq. [C.].
i'', *k''*. ♂ ad. et ♂ imm. st.	Jamaica.	Gould Coll.
l''. Ad. sk.	Nevis, W. Indies.	W. Cottle, Esq. [P.].
m''. ♀ sk.	S. Vincent, W. Indies, Oct. (*D. W. Smith*).	Salvin-Godman Coll.
n'', *o''*. ♂ sk.	Grenada, Sept. (*D. W. Smith*).	Salvin-Godman Coll.
p''. Sternum.	Jamaica.	P. H. Gosse, Esq. [C.].
q''. Sternum.		

5. Querquedula cyanoptera.

Pato alas azulas, *Azara, Apunt.* iii. pp. 437, 439, n. 434 (1805).

Canard aux ailes bleues, *Azara, Voy.* (*Sonn. ed.*) iv. p. 341 (1809).

Anas cyanoptera, *Vieill. N. D.* v. p. 104 (1816); *id. Enc. Méth.* i. p. 352 (1823); *Merrem in Ersch u. Grub. Enc.* sect. i. vol. xxxv. p. 33 (1841); *Burm. La Plata-Reise*, ii. p. 516 (1861); *Schleg. Mus. P.-B.*, Anseres, p. 51 (1866); *Gieb. Thes. Orn.* i. p. 349 (1872); *A. O. U. List N. Amer. B.* p. 117, n. 141 (1886); *Ridgw. Man. N. Amer. B.* p. 93 (1887); *Frenzel, J. f. O.* 1892, p. 125 (Cordoba); *Hartert, Kat. Vogelsamml.* p. 231 (Mexico) (1891); *Hatch, B. of Minnes.* p. 47 (1892).

? Anas jaspidea, *Vieill. N. D.* v. p. 162 (Paraguay) (1816) (*ex Azara*).

Canard à tête jaspée, *Vieill. ibid.*; *id. Enc. Méth.* i. p. 352 (1823).

Anas rafflesii, *King, Zool. Journ.* iv. p. 97 (1828), *Suppl.* pl. 29 (Magellan Straits); *Jard. & Selb. Ill. Orn.* new ser. pl. 23 (1838); *Cass. Journ. Ac. Philad.* iv. p. 195 (Louisiana) (1848).

Cyanopterus rafflesii, *Eyt. Mon. Anat.* pp. 38, 132 (1838); *Hartl. Verz. Ges. Mus.* p. 119 (1844).

Querquedula cærulata, "*Eyton*" (*scribe* cæruleata), *Fraser, P. Z. S.* 1843, p. 118; *G. R. Gr. List B. Brit. Mus.* iii. p. 138 (1844); *Yarrell, P. Z. S.* 1847, p. 54 (egg); *Des Murs in Gay's Hist. de Chile*, i. p. 452 (1848); *Blyth, Cat. B. Mus. A. S. B.* p. 305, n. 1782 (1849); *Hartl. Naumannia*, 1853, pp. 217, 222; *Gould, P. Z. S.* 1859, p. 95 (Falklands); *Philippi, Ornis*, 1888, p. 160 (Antofagasta).

Anas cæruleata, *Licht., fide G. R. Gr. List B. Brit. Mus.* iii. p. 138 (in synonym. Querquedulæ cæruleatæ) (1844); *Licht. in Mus. Berol., Bibra, Denkschr. Ak. Wien*, v. p. 131 (Chili) (1853); *id. J. f. O.* 1855, p. 57.

Pterocyanea cæruleata, *G. R. Gr. Gen. B.* iii. p. 617, n. 4 (1845); *Rchnb. Syn. Av.*, Natatores, t. 89. f. 178 (1845), t. 90. f. 2337 (1850) (*ex Jard. et Selby*); *Hartl. Ind. Azar. Apunt.* p. 27, n. 434 (1847); *Lawr. Ann. Lyc. N. Y.* v. p. 220 (California) (1852); *Bp. Compt. Rend.* xxxviii. p. 664 (California) (1853); *Woodh. Sitgr. Rep.* p. 103 (Texas, New Mexico, California) (1853); *Licht. Nomencl. Av.* p. 102 (Mexico, Chili) (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 87 (1856); *Newb. P. R. R. Rep.* vi. p. 103 (S. California) (1857); *Pelz. Reise Novara, Vögel*, p. 139 (1865); *Phil. & Landb. Cat. Av. Chil.* p. 42 (Chili) (1868).

? Boschas discors occidentalis, *Denny, P. Z. S.* 1847, p. 40.

Pterocyanea rafflesii, *Baird, Stansbury's Rep.* p. 322 (Great Salt Lake) (1852); *Eyt. Syn. Anat.* p. 88 (1869).

Querquedula cyanoptera, *Sclat. P. Z. S.* 1855, p. 164 (Bogota, Sta. Martha); *Cass. Ill. B. Calif.* p. 82, pl. 15 (Louisiana, Utah) (1855); *id. U.S. Astron. Exp.* ii. p. 202 (1856); *Sclat. P. Z. S.* 1856, p. 311 (Mexico); *Baird, B. N. Am.* p. 780 (Rocky Mountains to Pacific) (1858); *id. Cat. N. Am. B.* n. 582 (1859); *id. Mex. B. Surv.* ii. 2, *Birds*, p. 26 (Texas) (1859); *Sclat. P. Z. S.* 1859, p. 237 (Vancouver I.); *Kenn. P. R. R. Rep.* x. *Birds*, p. 35 (Arizona and California) (1859); *Heerm. ibid.* p. 69 (New Mexico and California) (1859); *Coop. & Suckl. ibid.* xii. p. 255 (Oregon) (1860); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 161; *Coues, Pr. Ac. Philad.* 1866, p. 98 (Arizona); *id. Ibis*, 1866, p. 263; *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Baird, Ibis*, 1867, p. 271; *Sclat. & Salv. Ibis*, 1868, p. 189 (Sandy Point); *Brown, Ibis*, 1868, p. 428; *Sclat. & Salv. P. Z. S.* 1869, p. 160 (Buenos Ayres); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *G. R. Gr. Hand-list*, iii. p. 83, n. 10657 (1871); *Merr. U.S. Geol. Surv. Terr.* 1872, p. 703 (Idaho, breeding); *Aiken, Pr. Bost. Soc.* xv. p. 210 (Colorado) (1872); *Allen, Bull. Mus. Comp. Zool.* iii. p. 183 (Utah) (1872); *Coues, Key*, p. 288 (1872); *id. Check-list*, n. 497 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Lawr. Mem. Bost. Soc. N. H.* v. p. 314 (Mexico) (1874); *Coues, Birds N.-West*, p. 567 (1874); *Tacz. P. Z. S.* 1874, p. 554 (Centr. Peru); *Sclat. & Salv. P. Z. S.* 1876, pp. 17, 384 (Peru); *Durnf. Ibis*, 1876, p. 163, 1877, p. 41 (Chuput), p. 191 (Buenos Ayres); *Tacz. P. Z. S.* 1877, p. 146 (W. Peru); *Durnf. Ibis*, 1878, p. 400 (Centr. Patagonia); *Sclat. P. Z. S.* 1880, p. 522; *Sharpe, P. Z. S.* 1881, p. 14 (Talcahuano); *Ridgw. Nom. N. Am. B.* n. 610 (1881); *Coues, Check-list*, 2nd ed. p. 114, n. 717 (1882); *Milne-Edw. Rech. Faun. Réy. Austral.* ch. ix. p. 46 (1882); *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); *White, P. Z. S.* 1882, p. 625; *B., B., & R. Water-Birds N. Am.* ii. p. 534 (1884); *Barrows, Auk*, 1884, p. 273 (Pampas); *Coues, Key N. Am. B.* 2nd ed. p. 696 (1884); *Tacz. & Berl. P. Z. S.* 1885, p. 116 (Ecuador); *Sclat. P. Z. S.* 1886, p. 401 (Tarapacá); *Tacz. Orn. Pér.* ii. p. 474 (1886); *Berl. J. f. O.* 1887, p. 133; *Sclat. Argent. Orn.* ii. p. 130 (1889); *Tristr. Cat. Coll. B.* p. 49 (1889); *Sclat. P. Z. S.* 1891, p. 136 (Tarapacá); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 203 (1891); *Kerr, Ibis*, 1892, p. 146 (Lower Pilcomayo); *Holland, ibid.* p. 206 (Argentina); *Berl. & Stolzm. P. Z. S.* 1892, p. 399; *Berk. James, New List Chil. B.* p. 9, n. 152 (1892); *Aplin, Ibis*, 1894, p. 200 (Uruguay).

Anas (Pterocyanea) cœruleata, *Burm. J. f. O.* 1860, p. 266 (Mendoza, Paraná).

Pterocyanea cyanoptera, *Burm. P. Z. S.* 1872, p. 368 (Argentina); *id. An. Mus. Nac. Buen. Air.* iii. p. 247 (1888).

Adult male. Head, neck, and lower parts uniform rich glossy chestnut; top of head blackish; belly shaded with blackish; under tail-coverts black; mantle, middle of the back, rump, and upper tail-coverts brown-black, with the edges of the feathers paler; scapulars chestnut, with black bands, the longer ones narrow, pointed, black, with a central buff stripe; wing-coverts and also the outer web of some of the outer scapulars smalt-blue, the greater row of the wing-coverts white, forming a white band anteriorly to the glossy green wing-speculum on the secondaries;

primaries, primary-coverts, and bastard-wing dark brown; under wing-coverts brown, with a bluish shade, and tipped with white, the inner ones, like the axillaries, white; tail-feathers brown, with narrow pale edges: bill black; feet yellow; iris dark brown. Total length about 18 inches, wing 7·9, tail 3·5, culmen 1·9, tarsus 1·25.

Female. Very similar to that of *Q. discors*, but somewhat larger, the bill especially; culmen 1·65–1·85; the feathers of the back less blackish, and with the pale greyish-brown edges broader and much more conspicuous; lower parts deeply tinged with light brown or buff-brown.

Young. Similar to adult female, but markings of lower parts much narrower, streak-like.

Young in down. "Above dark olivaceous, varied by a spot of deep greenish buff on each side of back (behind wings) and a spot of clearer yellowish on each side of rump, at base of tail; top of head and hind-neck similar to back, but darker; forehead, broad superciliary stripe, sides of head and neck, and lower parts generally, deep buff-yellow, the sides of the head marked with a distinct narrow stripe of dark brown." (*Ridgway.*)

Hab. Western America, from the Columbia River to Chili, Paraguay, Argentine Republic, Patagonia and Falkland Islands; casually in the Missisippi Valley.

a. ♂ ad. sk.	N. America.	Capt. Kellett & Lieut. Wood [P.].
b, c. ♂ ad. sk.	Carson, Nevada.	Salvin-Godman Coll.
d, e, f. ♂ ad. sk.	California (*D. S. Bryant*).	Salvin-Godman Coll.
g. ♂ ad. sk.	California, Dec. (*H. G. Parker*).	Salvin-Godman Coll.
h, i. ♂ ad. sk.	San Francisco, California.	Salvin-Godman Coll.
k–n. ♂ ad. sk.	Brownsville, Texas, Jan., March, April (*F. B. Armstrong*).	Salvin-Godman Coll.
o, p. ♀ ad. et ♂ imm. sk.	Presidio, Mexico, Feb. (*A. Forrer*).	Salvin-Godman Coll.
q. ♂ ad. sk.	Interior of New Granada (*Trübner*).	Salvin-Godman Coll.
r. ♂ ad. st.	Chili.	Lord Byron [P.].
s. ♂ ad. sk.	Chili.	Cuming Coll.
t–z. ♂ ♀ ad. et imm. sk.	Sacaya, Tarapacá, Jan., Feb., March.	H. Berkeley James, Esq. [P.].
a', b'. ♂ ad. sk.	Sitani, Tarapacá, Jan.	H. Berkeley James, Esq. [P.].
c'–k'. ♂ ♀ ad. et ♂ juv. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
l'. ♂ ad. sk.	Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
m', n'. ♂ ♀ ad. sk.	Colchagua, Chili, July.	H. J. Elwes, Esq. [P.].
o', p'. ♂ ♀ ad. sk.	Talcahuano, Chili, Sept.	Dr. Coppinger [C.].
q'. ♂ ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
r'. ♂ ad. sk.	Buenos Ayres, May.	H. Durnford, Esq. [P.].

s'. ♀ imm. sk.	Straits of Magellan.	Capt. King [C.].
t', *u'*. ♂ ♀ ad. sk.	Falkland Is., August.	Gould Coll.
v', *w'*. ♀ ad. et ♂ juv. sk.	Falkland Is.	Tweeddale Coll.

37. SPATULA.

	Type.
Spatula, *Boie, Isis*, 1822, p. 564	S. clypeata.
Rhynchaspis, *Leach, MSS.*; *Steph. Gen. Zool.* xii. 2, p. 114 (1824)	S. clypeata.
Spatulea, *Flem. Brit. Anim.* p. 123 (1828)	S. clypeata.
Clypeata (subgen.), *Less. Man. d'Orn.* ii. p. 416 (1828)..	S. clypeata.
Clypeata, "*Boie*," *Brehm, Isis*, 1830, p. 997	S. clypeata.
Anas, *Sw.* (*nec Linn.*) *Faun. Bor.-Am.* ii. p. 439 (1831).	S. clypeata.

Range. Cosmopolitan.

Key to the Species.

a. Longer scapulars with a white band along the central part; abdomen deep chestnut.
  a'. Head and upper portion of the neck deep glossy green ..... *clypeata* ♂, p. 306.
  b'. Head and upper portion of the neck bluish lead-colour, with a white crescentic band between the base of the bill and the eyes, extending to the throat ..... *rhynchotis* ♂, p. 314.
  c'. Head and neck light rufescent, minutely dotted with black ..... *platalea* ♂, p. 316.
b. Longer scapulars dark blue-green, more bluish on the outer web, with no white band along the central part; abdomen with no chestnut colour ..... *capensis* ♂, p. 318.

1. Spatula clypeata.

The Shoveler.

Anas americanus lato rostro, *Catesb. Carol.* i. t. 96 (♀) (1754).

Anas fera *sive* Boschas mexicana, *Briss. Orn.* vi. p. 327, n. 5 (1760) (*ex Hernandez*).

Anas clypeata, *Briss. Orn.* vi. p. 329, n. 6, tab. xxxii. f. 1 (1760).

Anas clypeata mexicana, *Briss. op. cit.* p. 337, n. 7 (1760) (*ex Hern.*).

Anas clypeata, *Linn. S. N.* i. p. 200, n. 19 (1766): *Scop. Ann. I. Hist. Nat.* n. 70 (1769); *id. Bemerk. Naturg.* p. 63 (1770); *Gm. S. N.* i. p. 518, n. 19 (1788); *Lath. Ind. Orn.* ii. p. 856, n. 60 (1790); *Bonn. Enc. Méth.* i. p. 150 (1791); *Lath. Tr. Linn. Soc.* iv. p. 109, pl. xiii. ff. 4, 5 (trachea) (1798); *Illig. Prodr.* p. 276 (1811); *Pall. Zoogr. Rosso-As.* ii. p. 282 (1811); *Wils. Am. Orn.* viii. p. 65, pl. 67. f. 7 (1814); *Temm. Man. Orn.* p. 543 (1815); *Vieill. N. D.* v. p. 155 (1816); *Dum. Dict. Sc. Nat.* vi. p. 370 (1817); *Temm. op. cit.* 2nd ed. ii. p. 842 (1820); *Brehm, Lehrb. Eur. Vög.* ii. p. 788 (1823); *Licht. Verz. Doubl.* p. 84 (Egypt, Nubia) (1823); *Bp. Obs. Wilson*, n. 255 (1825); *id. Syn.* p. 382 (1828); *Less. Man. d'Orn.* ii. p. 416 (1828); *Licht. Preis-Verz. mexic. Vög.* p. 3 (1830); *Wagler, Isis*, 1831, p. 532 (Mexico); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 439 (1831); *Less. Tr. d'Orn.* p. 632

(1831); *Savi, Orn. Tosc.* iii. p. 154 (1831); *Ménétr. Cat. Rais. Cauc.* p. 57 (Caspian) (1832); *Nutt. Man.* ii. p. 375 (1834); *Jen. Man.* p. 230 (1835); *Nordm. in Erman's Verz. Thier. Pflanz.* p. 18 (1835); *Sw. Class. B.* ii. p. 367 (1837); *Aud. Orn. Biogr.* iv. p. 241, pl. 327 (1838); *id. Syn.* p. 283 (1839); *Temm. Man.* 2nd ed. iv. p. 540 (1840); *Jerd. Madr. Journ.* xii. p. 220, n. 382 (1840); *Blyth, P. Z. S.* 1842, p. 220 (Calcutta); *Naum. Vög. Deutschl.* xi. p. 747, Taf. 306 (1842); *Aud. B. Am.* vi. p. 293, pl. 394 (1843); *Giraud, B. Long Isl.* p. 317 (1844); *DeKay, N. Y. Zool.* ii. p. 342 (1844); *Schleg. Rev. Crit.* p. cxv (1844); *Denny, P. Z. S.* 1847, p. 40; *Peale, U.S. Expl. Exp., Birds*, p. 251, sp. 164 (Hawaii and Oahu) (1848); *Degl. Orn. Eur.* ii. p. 423 (1849); *Temm. & Schleg. Faun. Jap., Aves*, p. 128 (1850); *Hartl. Arch. Naturg.* 1852, i. p. 122 (Hawaii, Oahu); *Midd. Sibir. Reis.* ii. p. 233 (1853); *Lemb. Av. Cub.* p. 115 (1856); *Adams, P. Z. S.* 1858, p. 510; *Kittl. Denkw.* ii. p. 294 (1858); *Tayl. Ibis*, 1859, p. 54 (Egypt); *Wied, J. f. O.* 1859, p. 174; *Mart. ibid.* p. 220 (Bermuda); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 312 (eggs) (1860); *Powys, Ibis*, 1860, p. 353; *Swinh. Ibis*, 1862, p. 254 (Foochow); *id. P. Z. S.* 1863, p. 324; *Licht. J. f. O.* 1863, p. 59 (Mexico); *Wright, Ibis*, 1864, p. 155; *Schleg. Mus. P.-B.*, Anseres, p. 33 (part.) (1866); *Sundev. Œfv. K. Vet.-Akad. Förh.* 1869, p. 603 (Porto Rico); *Dole, Pr. Bost. Soc. N. H.* xii. p. 305 (1869); *Przew. Putesch. Ussur.* n. 206 (1870); *Gurn. Ibis*, 1871, p. 299 (Algeria); *Tayl. Ibis*, 1872, p. 233 (Crimea); *Gieb. Thes. Orn.* i. p. 348 (syn. emend.) (1872); *Severtz. Turkest. Jevotn.* p. 30 (1873); *Adams, Ibis*, 1878, p. 432 (Michalaski); *Dole, Hawai. Alman.* 1879, p. 55; *Severtz. Ibis*, 1883, p. 76 (Pamir); *Seeb. Hist. Brit. B.* iii. p. 554, pl. 63 (egg) (1885); *id. B. Jap. Emp.* p. 242 (1890).

Anas clypeata β (Anas muscaria, *Gesn.*), *Linn. S. N.* i. p. 200 (1766); *Gm. S. N.* i. 2, p. 518 (1788); *Lath. Ind. Orn.* ii. p. 857 (1790); *Vieill. N. D.* v. p. 156 (1816).

Anatra mestolone, *Gerini, Stor. degli Ucc.* v. tav. 572 (♂) (1776).

Souchet, *D'Aubent. Pl. Enl.* 971 (♂), 972 (♀); *Buff. Hist. Nat. Ois.* ix. p. 191 (1783).

Red-breasted Shoveler, *Penn. Brit. Zool.* ii. n. 281 (England) (1785); *Lath. Syn.* iii. 2, p. 512, n. 57 (1785).

Mexican Shoveler, *Lath. Syn.* iii. 2, p. 511, n. 56 (1785).

Anas rufigaster, *Lath. Gen. Syn. Suppl.* i. p. 297 (1787).

Anas clypeata γ, *Gm. S. N.* i. 2, p. 519 (1788); *Lath. Ind. Orn.* ii. p. 857 (1790).

Anas mexicana, *Gm. S. N.* i. 2, p. 519, n. 81 (1788); *Lath. Ind. Orn.* ii. p. 857, n. 61 (1790); *Dum. Dict. Sc. Nat.* vi. p. 386 (1817); *D'Orb. in La Sagra's Hist. Nat. Cuba, Ois.* p. 299 (1840); *Gundl. J. f. O.* 1871, pp. 278, 280.

Anas rubens, *Gm. S. N.* i. p. 519, n. 82 (1788) (*ex Pennant*); *Lath. Ind. Orn.* ii. p. 857, n. 62 (1790); *Bonn. Enc. Méth.* i. p. 145 (1790); *Vieill. N. D.* v. pp. 134, 156 (1816); *Dum. Dict. Sc. Nat.* vi. p. 378 (1877).

Anas clypeata-mexicana, *Bonn. Enc. Méth.* i. p. 151 (1791).

Spatula clypeata, *Boie, Isis*, 1822, p. 564, 1826, p. 980; *G. R. Gr. List B. Brit. Mus.* iii. p. 139 (1844); *id. Gen. B.* iii. p. 618, n. 4 (1845) (syn. emend.); *Fraser, P. Z. S.* 1845, p. 13; *Rchnb. Syn. Av., Natatores*, t. 88. ff. 215–218 (1845); *Rüpp. Syst. Uebers.* p. 138, n. 496 (N.E. Afr.) (1845); *G. R. Gr. Cat. Hodys. Coll. B. M.* p. 146 (Nepal) (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 303, n. 1770 (syn. emend.) (1849); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Woodh.*

Sitgr. Rep. p. 104 (1853); *Layard, Ann. & Mag. N. H.* xiv. p. 270 (Ceylon) (1854); *Gould, P. Z. S.* 1856, p. 95; *Hartl. Syst. Orn. Westafr.* p. 248 (Casamance) (1857); *Cab. J. f. O.* 1857, p. 228 (Cuba); *Cass. U.S. Expl. Exp., Mam. & Orn.* p. 343 (1858); *Baird, B. N. Am.* p. 781 (1858); *id. Cat. N. Am. B.* n. 583 (1859); *id. Mex. B. Surv.* p. 27 (1859); *Heerm. P. R. R. Rep.* x. pt. vi. p. 69 (1859); *Sclat. & Salv. Ibis*, 1859, p. 231 (Guatemala); *Salv. ibid.* pp. 356, 363 (E. Atlas); *G. R. Gr. List B. Trop. Isl.* p. 55 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 255 (1860); *Lawr. Ann. Lyc. N. Y.* vii. p. 274 (Cuba) (1860); *A. Newt. Ibis*, 1860, p. 308 (St. Thomas); *Sclat. P. Z. S.* 1861, p. 82 (Jamaica); *Irby, Ibis*, 1861, p. 249 (Oudh); *Blakist. Ibis*, 1862, pp. 9, 332; *Sclat. P. Z. S.* 1862, p. 20 (Mexico); *Hayd. Rep.* 1862, p. 176; *G. R. Gr. List Br. B.* p. 197 (1863); *Ross, Canad. Nat.*, April 1862; *Verr. Pr. Ess. Inst.* iii. p. 158 (1862); *Albrecht, J. f. O.* 1862, p. 207 (Jamaica); *G. R. Gr. List Br. B.* p. 197 (1863); *id. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Blakist. Ibis*, 1868, p. 146; *Swinh. ibid.* p. 434 (Formosa); *March, Pr. Ac. Philad.* 1864, p. 71 (Jamaica); *Jerd. B. of Ind.* iii. p. 796 (1864); ? *Gould, Handb. B. Austr.* ii. p. 370 (N. S. Wales!) (1865); *Sclat. P. Z. S.* 1865, p. 618 (Hakodadi); *More, Ibis*, 1865, p. 442 (Great Brit.); *Gundl. Repert. Fis.-Nat.* i. p. 389 (Cuba) (1866); *Coues, Pr. Ac. Philad.* 1866, p. 99 (Arizona); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Léot. Ois. Trin.* p. 518 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 503 (1867); *Whitely, Ibis*, 1867, p. 207; *Coues, Pr. Ess. Inst.* v. p. 299 (1868); *Drake, Ibis*, 1869, p. 154 (Morocco); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Goeb. J. f. O.* 1869, p. 32 (Archangel); *Frantz. J. f. O.* 1869, p. 378 (Costa Rica); *Eyt. Syn. Anat.* p. 90 (1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 297 (Alaska) (1869); *Elwes & Buckl. Ibis*, 1870, p. 339 (Turkey); *Finsch, Tr. Zool. Soc.* vii. p. 301 (Abyssinia) (1870); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *G. R. Gr. Hand-list*, iii. p. 85, n. 10676 (1871); *Swinh. P. Z. S.* 1871, p. 418 (S. China, Formosa); *Gould, B. Great Brit.* v. pl. 14 (pt. xx., 1871); *Allen, Bull. Mus. Comp. Zool.* iii. p. 183 (Utah) (1872); *Holdsw. P. Z. S.* 1872, p. 479 (Ceylon); *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Coues, Key*, p. 288 (1872); *id. Check-list*, n. 498 (1873); *Layard, P. Z. S.* 1873, p. 205 (Ceylon); *Heugl. Orn. N.O.-Afr.* ii. 1, p. 1331 (1873); *Snow, B. Kansas*, p. 11 (1873); *Dresser, B. of Eur.* vi. p. 497, pl. 425 (pt. xxi., 1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Coues, Birds N.-West*, p. 570 (1874); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 314 (Mexico) (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 379 (Cuba); *Swinh. Ibis*, 1875, p. 457 (Hakodadi); *Brüggem. Zool. Gart.* 1876, p. 195; *Blakist. Ibis*, 1876, p. 235 (Kamtschatka); *Dress. ibid.* p. 420 (Turkestan); *Blanf. East. Persia*, p. 301 (1876); *Sclat. & Salv. P. Z. S.* 1876, p. 396; *Scully, Str. Feath.* iv. p. 199 (E. Turkestan) (1876); *David & Oust. Ois. Chine*, p. 500 (1877); *Prjev. in Rowley's Orn. Misc.* iii. p. 105 (Mongolia) (1878); ? *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 660 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 214; *Gundl. An. Soc. Esp. Hist. Nat.* vii. p. 404 (Porto Rico) (1878); *Hume, Str. Feath.* viii. p. 115, n. 957 (1879); *Sclat. & Salv. P. Z. S.* 1879, p. 543 (Medellin); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 185 (1880); *Legge, B. Ceylon*, p. 1086 (1880); *Sclat. P. Z. S.* 1880, p. 523; *Hume & Marsh. Game B. of Ind.* iii. p. 142, pl. 19 (1880); *Bidd. Ibis*, 1881, p. 99; *Scully, ibid.* p. 592; *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Ridgw. Nom. N. Am.*

Birds, n. 608 (1881); *C. Swinh. Ibis*, 1882, p. 124; *Coues, Check-list*, 2nd ed. p. 114, n. 718 (1882); *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 98 (1882); *B. O. U. List Brit. B.* p. 128 (1883); *Sclat. List Vert. An.* 8th ed. p. 437 (1883); *Nelson, 'Cruise Corwin,'* p. 96 (1883); *Coues, Key N. Am. B.* 2nd ed. p. 696 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 247 (Shoa) (1884); *B., B., & R. Water-B. N. Am.* i. p. 526 (1884); *Tristr. Faun. & Flor. Palest.* p. 116 (1884); *Saund. in Yarrell's Hist. Brit. B.* iv. p. 375 (1884–85); *Cory, List B. W. Ind.* p. 31 (1885); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 159 (Bering I.) (1885); *Zaroudn. Ois. Transcasp.* p. 72 (1885); *Sharpe, Ibis*, 1886, p. 493 (Fao); *A. O. U. Check-list N. Am. B.* p. 117, n. 142 (1886); *Salvad. El. Ucc. Ital.* p. 260 (1886); *Newt. Enc. Brit.* 9th ed. xxi. p. 842 (1886); *Turner, Contr. N. H. Alaska*, p. 133 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 69 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (Bering I.) (1887); *Ridgw. Man. N. Am. Birds*, p. 97 (1887); *Tacz. P. Z. S.* 1888, p. 460 (Corea); ? *Rams. Tab. List*, p. 22, n. 672 (New S. Wales) (1888); *Shufeldt, Pr. U.S. Nat. Mus.* 1888, pp. 230–248, ff. 15, 16, 17, 18, 20, 22, 23, 24, 25 (osteology); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 323 (Shoa) (1888); *Cory, Auk*, 1888, p. 64 (W. Indies); *id. B. W. Ind.* p. 265 (1889); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 91 (1889); *Lilf. Col. Fig. Br. B.* pt. x. pl. — (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Feild. Ibis*, 1889, p. 500 (Barbados); *North, Cat. Nests & Eggs Austr. B.* p. 371 (1889); *Saunders, Man. Brit. B.* p. 415 (1889); *Rchnw. J. f. O.* 1890, p. 82; *Evans, Ibis*, 1891, p. 73 (incubation); *Styan, ibid.* pp. 328, 497; *Sharpe, Sec. York. Miss., Aves*, p. 132 (1891); *id. Cat. Osteol. Specim. Coll. Surg.* iii. p. 303 (1891); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Hatch, B. of Minnes.* p. 47 (1892); *Harvey, Ann. Scott. N. H.* i. p. 138 (Orkney) (1892); *Battersby, Zool.* 1892, p. 311 (Westmeath); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 428, pl. 252 (1892); *De la Touche, Ibis*, 1892, p. 492; *Fairbridge, Ibis*, 1893, p. 153 (Cape!); *Meade-Waldo, ibid.* p. 199 (Canaries); *Koenig, J. f. O.* 1893, p. 104; *Chapm. Ibis*, 1894, p. 342 (W. Jutland); *Scott Wils. Aves Hawai.* pt. iv. (1893); *Chapm. Bull. Am. Mus. N. H.* 1894, p. 83 (Trinidad); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 594 (Somali) (1894).

Rhynchaspis clypeata, *Leach, MS.*; *Steph. Gen. Zool.* xii. 2, p. 115, pl. 48 (1824); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Eyt. Cat. Br. B.* p. 61 (1836); *Gould, B. of Eur.* v. pl. 360 (1837); *Eyt. Mon. Anat.* p. 134, pl. 3. f. 7 (sternum) (1838); *Bp. Comp. List*, p. 57 (1838); *Dicks. & Ross, P. Z. S.* 1839, p. 134 (Erzeroum); *Vig. Zool. Beachey's Voy.* p. 31 (1839); *K. & B. Wirbelth. Eur.* pp. lxxxv, 227 (1840); *Strickl. P. Z. S.* 1842, p. 167 (China); *Macgill. Man.* ii. p. 172 (1842); *Selys-L. Faun. Belg.* i. p. 143 (1842); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Gosse, B. Jam.* p. 408 (1847); *Hartl. Arch. f. Naturg.* 1852, i. pp. 136, 137 (Sandwich Isl.); *Bp. Compt. Rend.* xxxvii. p. 664 (1853); *Wallengr. Naumannia*, 1854, p. 270 (Scandinavia); *Licht. Nomencl. Av.* p. 102 (1854); *Sclat. P. Z. S.* 1855, p. 164 (Bogota!); *Bp. Compt. Rend.* xliii. p. 650, n. 82 (1856); *Newb. P. R. R. Rep.* vi. p. 103 (1857); *Cab. & Gundl. J. f. O.* 1857, p. 228 (Cuba); *Loche, Cat. Mamm. et Ois. Alg.* p. 141 (1858); *Murr. Edinb. New Phil. Journ.* 1859, p. 229; *Tristr. Ibis*, 1859, p. 37 (Palestine), 1860, p. 81 (N.E. Afr.); *Simpson, Ibis*, 1860, p. 394; *Brew. Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *Swinh. Ibis*, 1861, p. 57 (Hongkong); *Tristr. P. Z. S.* 1864, p. 453 (Palestine); *Swinh.*

Ibis, 1867, p. 388; *Shelley, Ibis*, 1871, p. 316; *Saund. Ibis*, 1871, p. 396 (S. Spain); *Shelley, B. of Egypt*, p. 285 (1872); *Tacz. J. f. O.* 1873, p. 110, 1874, p. 337; *id. Orn. Vost. Sibir.* p. 20 (1877); *id. Bull. Soc. Zool. Fr.* 1877, p. 46, 1883, p. 343; *Radde, Ornis Caucas.* p. 458 (1884).

Rhynchaspis mexicana, *Steph. Gen. Zool.* xii. 2, p. 118 (1824).

Spatulea clypeata, *Flem. Brit. Anim.* p. 123 (1828).

Clypeata macrorhynchos, *Brehm, Isis*, 1830, p. 997; *id. Vög. Deutschl.* p. 876 (1831).

Clypeata platyrhynchos, *Brehm, Isis*, 1830, p. 997; *id. Vög. Deutschl.* p. 877 (1831).

Clypeata pomarina, *Brehm, Isis*, 1830, p. 997; *id. Vög. Deutschl.* p. 879 (1831).

Clypeata brachyrhynchus, *Brehm, Isis*, 1830, p. 997; *id. Vög. Deutschl.* p. 878 (1831).

Rhynchaspis virescens, *Leach MSS., fide Sykes, P. Z. S.* 1832, p. 168, n. 217 (Dukhun).

Rhynchaspis macrorhynchos, *Brehm, Vogelf.* p. 377 (1855).

Rhynchaspis platyrhynchos, *Brehm, Vogelf.* p. 378 (1855); *id. Naumannia*, 1855, p. 298.

Rhynchaspis pomarina, *Brehm, Naumannia*, 1855, p. 298.

Rhynchaspis brachyrhynchos, *Brehm, ibid.*

Rhynchaspis platyuros, *Brehm, ibid.*

Rhynchaspis clypeata *a.* mexicana, *Bp. Compt. Rend.* xliii. p. 650 (1856).

Anas (Rhynchaspis) clypeata, *Schrenck, Reis. Amurl.* i. p. 481 (1860); *Radde, Reis. S. O.-Sibir.* ii. p. 373 (1863).

Rhynchaspis spathulata, *C. F. Dub. Pl. Col. Ois. Belg.* iii. p. 276 (1860).

Rhynchasmus (!) clypeata, *Koenig, J. f. O.* 1893, p. 104.

Adult male. Head and upper part of the neck dark glossy green; lower neck, breast, and the anterior scapulars white; middle of the back dark brown, the feathers with pale edges; rump and upper tail-coverts black glossed with green; lower breast and abdomen rich chestnut; flanks, vent, and thighs paler, freckled with brown; under tail-coverts black, glossed with green; a white patch on the lower flanks at the base of the tail; upper wing-coverts and the outer web of two of the longer scapulars pale blue; remainder of the scapulars black, all with a broad silky white stripe along the middle; last row of the wing-coverts tipped with white, forming a band, which borders anteriorly the glossy green wing-speculum; the tip of the secondaries and the primaries brown; under wing-coverts and axillaries white; tail mostly white, freckled with brown-grey, the central feathers brown, edged with white: irides yellow; bill lead-colour: feet reddish orange. Total length about 20 inches, wing 10·25, tail 3·75, culmen 2·75, tarsus 1·4.

Female. General colour of the upper parts brown, each feather with a broad reddish margin; throat reddish immaculate; feathers of the back and scapulars with reddish bars, more or less crescentic; underparts reddish buff, each feather brown in the central part, especially those of the breast and flanks; under tail-coverts lighter; the wings resemble those of the male, except that the blue on the wing-coverts is very dull, and the speculum not so glossy;

tail-feathers whitish, with brown marks: beak olive-brown, base of the maxilla and the entire mandible orange; irides hazel-brown; feet dull orange.

Male in first plumage resembles the female, but the wings are brighter coloured; bill pale reddish brown; legs and feet flesh-colour.

Males in their first nuptial plumage have the white of the breast with a few dark crescentic bands, the lower belly with dark bars, and the rich black of the under tail-coverts mottled with chestnut and white.

Adult male in moulting plumage may be distinguished from the adult female by the greater brilliancy of the blue and metallic green on the wing, the plain dark upper tail-coverts, and the general darker colour of the entire plumage; the crown is dark brown.

Young in down resemble those of the Wigeon in having the upper parts almost uniform, with indistinct pale spots, but they possess the dark brown stripe through the eye as in the young Mallard. The bill is not widened at the tip, but it grows very rapidly.

Hab. Northern hemisphere, breeding as far north as lat. 68°: from the Palæarctic region in winter extends in Africa as far south as Casamance on the West, and Somali-land on the East; and in Asia as far as Arabia, Persia, India, Ceylon, Formosa, Southern China, and Japan; in America as far as Colombia and the West Indies.

a, b. ♂ ♀ ad. st.	Great Britain.	Purchased.
c. ♀ ad. st.	Great Britain.	
d. ♀ juv. sk.	Loch Lomond, Scotland, Aug.	The Duke of Montrose [P.].
e, f. ♂ ♀ ad. st.	Merton, Norfolk, May.	Lord Walsingham [P.].
g–l. ♂ ♀ ad. et juv. sk. et st.	Lincolnshire.	Montagu Coll.
m. ♂ ad. st.	Essex.	Theo. Fisher, Esq. [P.].
n. Juv. sk.	Aldeburgh, Suffolk, Aug.	Theo. Fisher, Esq. [P.].
o. ♂ ad. st.	Somersetshire.	Montagu Coll.
p, q. ♂ ♀ ad. sk.	Christchurch, Hants.	Baron A. von Hügel [P.].
r–v. ♂ ad. et ♂ ♀ juv. sk.	Poole Harbour, Dec., Jan., Feb.	Baron A. von Hügel [P.].
w. ♂ imm. sk.	Archangel, June.	Baron A. von Hügel [P.].
x, y, z. ♀ ad. et ♂ ♀ juv. sk.	Hiddensee, Germany, June, Nov.	Baron A. von Hügel [P.].
a'. ♂ imm. sk.	Hungary, Sept.	Hungarian National Museum [P.].
b'. ♂ ad. sk.	Galicia.	Baron A. von Hügel [P.].
c'. ♂ ad. sk.	Sardinia, March (*G. E. S.*).	Shelley Coll.
d'. ♀ ad. sk.	Eubœa, Greek Archipelago, Feb.	H. J. Elwes, Esq. [P.].

e', *f'*, *g'*. ♂ imm. et juv. sk.	Egypt, Feb., April (*G. E. S.*).	Shelley Coll.
h'. ♀ ad. sk.	Egypt.	J. Bowring, Esq. [P.].
i'. ♂ ad. sk.	Alexandria, Feb.	Shelley Coll.
k', *l'*. ♂ ♀ ad. sk.	Senafé, Abyssinia, April (*Wm. Jesse*).	Tweeddale Coll.
m', *n'*, *o'*. ♂ ad. et ♀ imm. sk.	Angollala (*Harris*).	India Museum [P.].
p'. ♀ juv. sk.	Aden.	C. Chevalier, Esq. [P.].
q'. ♀ ad. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
r'. ♀ ad. sk.	Mesopotamia (*Jones*).	Euphrates Exped. [C.].
s', *t'*. ♂ ♀ ad. sk.	Fao, Persian Gulf.	W. D. Cumming, Esq. [P.].
u', *v'*. ♂ ad. et imm. sk.	Lenkoran.	Seebohm Coll.
w'. ♂ ad. sk.	Sarepta, April.	Baron A. von Hügel [P.].
x'. Pull. sk.	Kasan, June.	Baron A. von Hügel [P.].
y'. ♀ imm. sk.	Omsk, May.	St. George Littledale, Esq. [P.].
z'. ♀ juv. sk.	Narimskaja, Ob R., Sept.	Dr. O. Finsch [P.].
a''. ♂ ad. sk.	Valley of the Yen-e-say, Siberia, Lat. 66½°, June (*H. S.*).	Seebohm Coll.
b'', *c''*, *d''*. ♂ ♀ imm. et ♂ juv. sk.	Kashgar (*Bellew*).	India Museum [P.].
e''. ♂ ad. sk.	Panja, Yarkand, April (*F. Stoliczka*).	India Museum [P.].
f''. ♀ ad. sk.	Ladak (*Strachey*).	India Museum [P.].
g''. ♂ ad. sk.	Kalla-maur, Afghanistan, March (*Aitchison*).	Afghan Delimitation Comm. [P.].
h'', *i''*. ♂ ♀ ad. sk.	Kandahar, Feb., March.	Lieut.-Col. Swinhoe [P.].
k''. ♂ ad. sk.	Ranepoor, Sindh.	Gould Coll.
l''. Ad. sk. (isabelline var.).	The Null, Kattiawar, Sindh, Feb. (*H. E. James*).	Hume Coll.
m''. ♀ ad. sk.	Hamal Mehur, Jan. (*A. O. H.*).	Hume Coll.
n''. ♂ ad. sk.	Khandeish, March (*J. Davidson*).	Hume Coll.
o''–r''. ♂ ♀ ad. et ♂ imm. sk.	Sambhur, Dec., Jan. (*R. M. Adam*).	Hume Coll.
s''. ♂ imm. sk.	Sirsa.	Hume Coll.
t''–w''. ♂ ♀ ad. et imm. sk.	Gurgaon, Feb., March (*W. N. Chill*).	Hume Coll.
*x''–b*³. ♂ ♀ ad. et imm. sk.	Etawah.	Hume Coll.
*c*³. ♀ juv. sk.	Allahabad, Jan. (*A. O. H.*).	Hume Coll.
*d*³. ♂ juv. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
*e*³, *f*³, *g*³. ♂ ♀ ad. et ♂ juv. sk.	Oudh, Dec.	Hume Coll.
*h*³. ♀ juv. sk.	Muddapur, Jan.	Seebohm Coll.
*i*³, *k*³. ♂ ad. et juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].

*l*³. ♀ ad. sk.	Nepal (*B. H. Hodgson*).	India Museum [P.].
*m*³. ♂ ad. sk.	Native Sikhim, March (*L. Mandelli*).	Hume Coll.
*n*³. ♂ ad. sk.	Bootan (*Pemberton*).	India Museum [P.].
*o*³. ♂ ad. sk.	Shan States.	E. W. Oates, Esq. [P.].
*p*³. ♂ ad. sk.	Cochin China.	M. St. Pierre [P.].
*q*³. ♂ ad. sk.	Lob-nor, March (*Prjevalsky*).	Seebohm Coll.
*r*³. ♂ ad. sk.	Djungaria, May (*Prjevalsky*).	Seebohm Coll.
*s*³. ♂ ad. sk.	China (*Tuckett*).	Tweeddale Coll.
*t*³. ♂ ad. sk.	China.	Fortune Coll.
*u*³, *v*³, *w*³. ♂ ♀ ad. sk.	Kiukiang, China, March.	F. W. Styan, Esq. [P.].
*x*³. ♂ ad. sk.	Shanghai, China.	Lieut. Davies [P.].
*y*³. ♀ imm. sk.	Amoy, China.	H. Saunders, Esq. [P.].
*z*³. ♀ imm. sk.	Canton Market, China (*R. Swinhoe*).	Seebohm Coll.
*a*⁴, *b*⁴. ♂ ad. et juv. sk.	Takow, Formosa, Feb., Dec. (*R. S.*).	Seebohm Coll.
*c*⁴, *d*⁴. ♂ ad. et ♀ imm. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
*e*⁴–*h*⁴. ♂ ♀ ad. et imm. sk.	Nagasaki, Japan, Jan., Feb., March.	F. Ringer, Esq. [P.].
*i*⁴. ♂ ad. sk.	S. Yezo, Japan, Oct. (*Blakiston*).	Seebohm Coll.
*k*⁴. ♀ ad. sk.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].
*l*⁴, *m*⁴, *n*⁴. ♂ ad. et juv. sk.	Brit. Columbia.	J. K. Lord, Esq. [P.].
*o*⁴, *p*⁴, *q*⁴. ♂ ♀ ad. et imm. sk.	Ft. Dufferin.	N. America Boundary Comm. [P.].
*r*⁴. ♂ ad. sk.	Ft. Simpson, July.	B. R. Ross, Esq. [P.].
*s*⁴, *t*⁴. ♂ ad. et ♀ imm. sk.	49th Parallel, April.	N. America Boundary Comm. [P.].
*u*⁴. ♀ juv. sk.	Massachusetts, Oct.	Salvin-Godman Coll.
*v*⁴. ♂ imm. sk.	Chicago, Illinois, April (*E. W. Nelson*).	Salvin-Godman Coll.
*w*⁴. ♂ ad. st.	Rockport, N. America.	Prof. Kirtland [P.].
*x*⁴. ♀ imm. sk.	Fairport, N. America.	Prof. Kirtland [P.].
*y*⁴. ♂ juv. sk.	French Broad R., near Alexander's, N. C., April (*H. W. H.*).	Salvin-Godman Coll.
*z*⁴. ♂ ad. sk.	Denver, Colorado, May.	Salvin-Godman Coll.
*a*⁵–*d*⁵. ♂ ad. sk.	Brownsville, Texas, March, April (*F. B. Armstrong*).	Salvin-Godman Coll.
*e*⁵–*k*⁵. ♂ ♀ juv. sk.	Corpus Christi, Texas, Oct., Dec. (*F. B. A.*).	Salvin-Godman Coll.
*l*⁵. ♂ ad. sk.	California, Dec. (*H. G. Parker*).	Salvin-Godman Coll.
*m*⁵–*p*⁵. ♂ ♀ juv. sk.	Zacatecas, Mexico, Feb. (*W. B. Richardson*).	Salvin-Godman Coll.
*q*⁵, *r*⁵. ♂ juv. et ♀ imm. sk.	Presidio, Mexico, Feb. (*A. Forrer*).	Salvin-Godman Coll.
*s*⁵–*v*⁵. ♂ ♀ ad. et imm. sk.	Dueñas, Guatemala, Feb., Oct. (*O. S.*).	Salvin-Godman Coll.
*w*⁵. ♂ ad. sk.	Huamuchal, Guatemala, Feb. (*O. S.*).	Salvin-Godman Coll.
*x*⁵. ♂ juv. sk.	Medellin, U.S. Colombia (*T. K. Salmon*).	Salvin-Godman Coll.

y^5, z^5. Pull. st.		Purchased.
d^6. Skeleton.	England.	Purchased.
b^6. Skeleton, imperfect.	Nepal.	B. H. Hodgson, Esq. [P.].
c^6. Skull.		
d^6. Sternum.	England.	T. Ingall, Esq. [P.].
e^6. Sternum with shoulder-girdle.	England.	J. Ray, Esq. [P.].

2. Spatula rhynchotis.

New Holland Shoveler, *Lath. Gen. Syn. Suppl.* ii. p. 339, n. 37 (1801).

Anas rhynchotis, *Lath. Ind. Orn. Suppl.* p. lxx, n. 5 (1801); *Less. Tr. d'Orn.* p. 633 (1831); *Schleg. Mus. P.-B.*, Anseres, p. 35 (1866); *Gieb. Thes. Orn.* i. p. 361 (syn. emend.) (1872); *Finsch, Ibis*, 1880, p. 397.

Rhynchaspis rhynchotis, *Steph. Gen. Zool.* xii. 2, p. 123 (1824); *Eyt. Mon. Anat.* p. 133 (1838); *P. Z. S.* 1839, p. 114; *Bp. Compt. Rend.* xliii. p. 650, n. 85 (1856); *Buller, Hist. B. New Zeal.* 2nd ed. ii. p. 271 (1888).

Spatula rhynchotis, *G. R. Gr. List B. Brit. Mus.* iii. p. 140 (syn. emend.) (1844); *id. Gen. B.* iii. p. 618, n. 2 (syn. emend.) (1845); *Gould, B. Austr.* viii. pl. 12 (pt. xx., 1845); *Rchnb. Syn. Av.*, Natatores, t. 110. f. 980 (1845), t. cclxxxiii. (86) ff. 2334–35 (1850) (*ex Gould?*); *Gould, P. Z. S.* 1856, p. 95; *id. Handb. B. Austr.* ii. p. 368 (1865); *Pelz. Reis. Novara, Vög.* p. 139 (New Holland) (1865); *Eyt. Syn. Anat.* p. 88 (1869); ? *Marie, Act. Soc. Linn. Bord.* xxvii. p. 328 (New Caledonia) (1870); *G. R. Gr. Hand-list*, iii. p. 85, n. 10677 (1871); *Diggl. B. Austr.* ii. pl. 112 (1877); ? *Marie, Ibis*, 1877, p. 363 (New Caledonia); *Ramsay, Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 659 (1878); *Legge, B. of Ceyl.* p. 1088 (1880); *Sclat. P. Z. S.* 1880, p. 523; *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); ? *Layard, Ibis*, 1882, pp. 538, 544 (New Caledonia); *B., B., & R. Water-B. N. Am.* i. p. 525 (1884); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Rams. Tab. List*, p. 22. n. 671 (1888); *North, Cat. Nests & Eggs Austr. B.* p. 343 (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Wiglesw. Aves Polyn.* p. 70 (syn. emend.) (New Caledonia) (1891); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Sharpe, Cat. Ostcol. Specim. Coll. Surg.* iii. p. 303 (1891).

(Spatula variegata.)

Spatula rhynchotis, *G. R. Gr.* (*nec Lath.*) *in Dieff. Trav.* ii. App. p. 198 (N. Zealand) (1843); *id. Voy. Ereb. & Terr., Birds*, p. 15 (1846); *Sharpe, op. cit.* p. 92 (1875).

Spatula variegata, *Gould, P. Z. S.* 1856, p. 51 (New Zealand); *id. B. Austr., Suppl.* pl. 80 (pt. iii., 1859); *G. R. Gr. Ibis*, 1862, p. 241; *Gould, Handb. B. Austr.* ii. App. p. 580 (1865); *Bull. New Zeal. Exh.* p. 255 (1866); *Hector, New Zeal. Exh.* p. 277 (Otago) (1866); *Hutt. Ibis*, 1870, p. 395 (Auckland); *G. R. Gr. Hand-list*, iii. p. 85, n. 10680 (syn. emend.) (1871); *Potts, Tr. New Zeal. Inst.* v. p. 199 (1872); *Travers, ibid.* p. 218 (Chatham I.) (1872); *Bull. Hist. B. New Zeal.* p. 252, pl. 26 (♂ ♀) (1873);

Legge, B. of Ceyl. p. 1088 (1881); *Sclat. P. Z. S.* 1880, p. 523; *North, Rec. Austr. Mus.* ii. p. 37 (Tasmania) (1892).

Rhynchaspis variegata, *Bp. Compt. Rend.* xliii. p. 650, n. 86 (1856) (syn. emend.?); *Finsch, J. f. O.* 1870, p. 358; *Potts, Tr. N. Z. Inst.* iii. (1870) p. 102 (1871); *Hutton, Cat. B. N. Zeal.* p. 37 (1871); *Hutton, Ibis*, 1872, p. 248 (Chatham Is.); *Finsch, J. f. O.* 1872, p. 187, 1874, p. 202; *Buller, Man. B. New Zeal.* p. 70, pl. xxx. (1882); *Bull. Hist. B. New Zeal.* 2nd ed. ii. p. 269, pl. xliv. (1888); *Forbes, Ibis*, 1893, p. 543 (Chatham I.).

Anas rhynchotis, *Ellman (nec Lath.), Zoologist*, 1861, p. 7471; *Schleg. Mus. P.-B.*, Anseres, p. 35 (part.) (1866); *Gieb. Thes. Orn.* i. p. 361 (part.) (1872).

Adult male. Crown of the head, space surrounding the base of the bill, and chin brownish black; a crescentic white band between the bill and the eyes, bounded posteriorly by speckles of black; rest of the head and neck bluish grey, with greenish reflections, especially on the sides of the nape; back brownish black, the feathers edged with reddish; rump and upper tail-coverts black, with a green gloss; feathers of the lower neck and upper breast more or less white, with blackish-brown crescentic bands, and edged with rufous; lower breast and abdomen bright rufous chestnut, with black bands; the flanks brighter, each feather crossed by several broad crescentic bands of black; under tail-coverts black, glossed with green; a white patch on the lower flanks on each side of the base of the tail; shorter scapulars brown, with white crescentic bars and rufous edges; the longer scapulars with a central greyish-white stripe, but the upper ones glossy black, while the lower ones have the outer web light blue like the upper wing-coverts; upper wing-coverts light blue, the anterior ones of the last row broadly tipped with white; wing-speculum glossy green, the tips of the secondaries brown with a blue tinge; the inner secondaries or tertials long, black, with a blue gloss, some with a whitish central stripe; marginal under wing-coverts pale brown, edged with white, the remainder of the axillaries entirely white; tail black, the outer feathers narrowly edged with whitish on the outer web: "irides bright yellow; bill dark purplish black, the under mandible clouded with yellow; legs and feet yellow" (*Gould*). Total length 22 inches, wing 9·75, tail 4, culmen 2·55, tarsus 1·3.

Female. Very similar to that of *S. clypeata*, from which it differs in being darker, heavier brown-spotted on the underparts, and principally in the tail, which is dark brown, with rufescent edges and narrow bars, instead of being pale fawn-colour with brown marking; the speculum is of a darker green.

Young. Similar to the female, but duller and darker.

Although I have kept separate the synonymy of *S. variegata* from New Zealand, I must say that I have not been able to satisfy myself that it is different from *S. rhynchotis* of the Australian continent. According to Mr. Gould the New Zealand male bird has much more white on the sides of the lower neck and breast. I have seen Australian birds which have as much white on the sides of the neck and breast as the New Zealand ones; and knowing how much the extension of the white on the neck varies

in the male of *S. clypeata* according to age, I am inclined to consider the Australian and New Zealand forms as specifically identical.

Hab. Australia, Tasmania, and New Zealand.

a. ♂ imm. st.	Australia.	Purchased.
b, c. ♂ ad. sk.	Australia?	Gould Coll.
d. ♂ imm. sk.	Australia.	H. J. Elwes, Esq. [P.].
e. ♂ ad. sk.	Australia.	Sir D. Cooper [P.].
f, g, h. ♂ ♀ imm. sk.	Australia.	F. D. Godman, Esq. [P.].
i, k. ♂ ♀ ad. st.	N. S. Wales.	Australian Museum [P.].
l. ♂ ad. sk.	N. S. Wales.	Hume Coll.
m. ♂ imm. st.	S. Australia.	Sir G. Grey [P.].
n. ♂ ad. sk.	Tasmania.	Hume Coll.
o. Juv. sk.	Near Hobart Town, Tasmania, Nov.	Gould Coll.
p. ♂ imm. sk.	New Zealand.	P. Earl, Esq. [P.].
q. ♂ ad. sk.	New Zealand.	W. Mantell, Esq. [P.]. (Type of *Spatula variegata*, Gould.)
r, s. ♀ ad. et ♂ imm. sk.	Cook's Straits, New Zealand.	Capt. Stokes [P.].

3. Spatula platalea.

Pato espátula, *Azara, Apunt.* iii. p. 427, n. 431 (Buenos Ayres) (1805), *undè*

Anas platalea, *Vieill. N. D.* v. p. 157 (1816); *id. Enc. Méth.* i. p. 357 (1823); *Burm. La Plata-Reise*, ii. p. 517 (Paraná and Buenos Ayres) (1861); *Schleg. Mus. P.-B.*, Anseres, p. 35 (1866); *Gieb. Thes. Orn.* i. p. 360 (1872).

Spatula platalea, *Boie, Isis*, 1826, p. 980; *Hartl. Ind. Azar. Apunt.* p. 27, n. 431 (1847); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Sclat. & Salv. P. Z. S.* 1868, p. 145 (Conchitas); *G. R. Gr. Hand-list*, iii. p. 85, n. 10678 (1871); *Burm. P. Z. S.* 1872, p. 368 (Argentine); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (Falklands) (1873); *Durnf. Ibis*, 1876, p. 163 (Buenos Ayres); *Sclat. & Salv. P. Z. S.* 1876, pp. 17, 396 (Tungasuca, Peru); *Durnf. Ibis*, 1877, p. 41 (Chuput), 1878, p. 65 (Buenos Ayres), p. 401 (Centr. Patag.); *Sclat. & Salv. P. Z. S.* 1878, p. 436 (Sandy Point); *Legge, B. of Ceyl.* p. 1088 (1880); *Sclat. P. Z. S.* 1880, p. 523; *Sclat. & Salv. Voy. Challeng., Birds*, p. 107 (1881); *White, P. Z. S.* 1882, p. 625 (Argentine); *Salv. Cat. B. Strickl. Coll.* p. 536 (1882); *B., B., & R. Water-Birds N. Am.* pp. 525, 526 (1884); *Barrows, Auk*, 1884, p. 274 (Carhue, Pampas); *Tacz. Orn. Pér.* ii. p. 480 (1886); *Berl. J. f. O.* 1887, p. 124; *Tristr. Cat. Coll. B.* p. 48 (type of *R. maculatus*, J. & S.) (1889); *Sclat. Argent. Orn.* ii. p. 136 (1889); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Frenzel, J. f. O.* 1891, p. 125 (Cordoba); *Berk. James, New List Chil. B.* p. 9, n. 160 (1892); *Kerr, Ibis*, 1892, p. 146 (Lower Pilcomayo); *Holland, ibid.* p. 208; *Aplin, Ibis*, 1894, p. 201 (Uruguay).

Rhynchaspis maculatus, *Gould MS., Jard. & Selby, Ill. Orn.* iii. pl. 147 (1835); ? *Eyt. Mon. Anat.* p. 134 (New Holland!) (1838); *Gould, Voy. 'Beagle,' Birds*, p. 135 (1841); *Fraser, P. Z. S.* 1843, p. 118 (Chili); *Yarrell, P. Z. S.* 1847, p. 54 (egg, Chili); *Des Murs in Gay, Hist. de Chile*, i. p. 454 (syn. emend.) (1848); *Hartl.*

Naumannia, 1853, p. 222; *Phil. & Landb. Cat. Av. Chil.* p. 43 (1868); *Waugh & Lataste, Act. Soc. Sc. Chil.* iv. p. lxxxix (Peñaflores) (1894).

Rhynchaspis maculata, *Hartl. Verz. Ges. Mus.* p. 120 (1844).

Spatula rhynchotis, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 140, specim. *b* (1844); *id. Gen. B.* iii. p. 618, n. 2 (part.) (1845).

Dafila cæsioscapula, *Rchnb. Syn. Av.*, Natatores, t. li. (89) f. 180 (1845).

Dafila cæsioscapulata, *Bibra, Denkschr. Ak. Wien*, v. p. 131 (Chili) (1853); *id. J. f. O.* 1855, p. 57.

Rhynchaspis mexicana, *Licht.* (*nec Gm.*) *Nomencl. Av.* p. 102 (Montevideo, Chili) (1854).

Rhynchaspis platalea, *Bp. Compt. Rend.* xliii. p. 650, n. 83 (1856).

Spatula maculatus, *Gould, P. Z. S.* 1856, p. 95 (Peru ?, Bolivia ?); *Eyt. Syn. Anat.* p. 89 (1869).

Spatula (Rhynchaspis) maculata, *Pelz. Reis. Novara, Vög.* p. 139 (Chili) (1865).

Adult male. General plumage reddish, thickly spotted with black; head and neck light rufescent, minutely dotted with black, chin almost immaculate; crown black, with pale edges to the feathers; chest and abdomen chestnut; shorter scapulars reddish, with black spots like the back; lower back, rump, and upper tail-coverts black, with a golden gloss; under tail-coverts black; on the lower flanks, at the base of the tail, a white patch; longer scapulars glossy black, with a central buff stripe along the middle, the superior ones edged with rufous; wing-coverts light blue, the last row white at the tip, forming a band anteriorly to the wing-speculum, which is glossy green, with a blue lustre towards the tip and on the inner secondaries; primary-coverts and primaries greyish brown, the latter darker and with a green lustre towards the tip; marginal under wing-covert greyish brown, with a blue tinge, the remainder and the axillars white; tail greyish black, the outer feathers lighter, all broadly edged with whitish on the outer webs: bill dark, almost blackish; feet yellow; irides white. Total length about 20 inches, wing 9, tail 5·3, culmen 2·5, tarsus 1·4.

Female. Very similar to the female of *S. clypeata*, so like that it is very difficult to distinguish it, except by the bill, which is a little shorter and in dry skin of a dusky colour, while in *S. clypeata* it becomes yellowish.

Hab. Southern America, from the Falklands and Patagonia to Peru on the West, and Paraguay on the East: possibly also Bolivia.

a. ♂ ad. st.	No locality.	Lord Byron [P.].
b. ♀ juv. sk.	Tarapacá, N. Chili, Feb.	H. Berkeley James, Esq. [P.].
c, *d*, *e*. ♂ ♀ ad. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
f. ♂ ad. sk.	Rio Bueno, Chili, Jan.	H. Berkeley James, Esq. [P.].
g, *h*. ♀ juv. sk.	Rio Pilmaiquen, Chili, Feb.	H. Berkeley James, Esq. [P.].
i. ♂ ad. sk.	Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
k. ♀ imm. sk.	Mendoza.	H. J. Elwes, Esq. [P.].

l. ♂ ad. sk.	Uruguay, Oct.	Alan Peel, Esq. [C.].
m. ♂ ad. sk.	Conchitas, Buenos Ayres (*W. H. Hudson*).	Salvin-Godman Coll.
n. ♂ ad sk.	Moreno, Buenos Ayres, May.	H. Durnford, Esq. [P.].
o. ♂ ad. sk.	Sandy Point, Str. of Magellan.	'Challenger' Exped.
p. ♀ juv. sk.	Falkland Is. (*Leconte*).	Salvin-Godman Coll.

4. Spatula capensis.

Rhynchaspis capensis, *Smith, Cat. S. Afr. Mus.* p. 36, no. 322 (1837) (descr. nulla); *Eyt. Mon. Anat.* p. 135 (1838); *Smith, Ill. S. Afr. Zool., Birds,* pl. 98 (1844); *Bp. Compt. Rend.* xliii. p. 650, n. 84 (1856); *Layard, B. S. Afr.* p. 354 (1867); *Boc. Jorn. Ac. Sc. Lisb.* 1867, p. 330; *Gurn. Ibis.* 1868, p. 50 (Transvaal and Natal); *E. L. Layard, Ibis,* 1869, p. 377 (eggs); *Boc. Jorn. Ac. Sc. Lisb.* 1872, p. 70; *Salvad. P. Z. S.* 1884, p. 173 (note).

Spatula clypeata, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 139, specim. *j* (Cape) (1844).

Spatula capensis, *G. R. Gr. Gen. B.* iii. p. 618, n. 3 (1845); *Reichnb. Syn. Av.,* Natatores, t. L. (88) ff. 219–220 (1845) (*ex Smith*); ? *Des Murs, in Lefebvre, Voy. Abyss., Ois.* p. 172 (1845–1850); *Gould, P. Z. S.* 1856, p. 95; *Eyt. Syn. Anat.* p. 91 (1869); *G. R. Gr. Hand-list,* iii. p. 85, n. 10679 (1871); *Anderss. B. Damara Land,* p. 341 (1872); *Boc. J. f. O.* 1876, p. 294 (Rio Coroca); *Sclat. P. Z. S.* 1880, p. 523; *Boc. Orn. Angola,* p. 504 (Rio Coroca) (1881); *Butl., Feild, & Reid, Zoolog.* 1882, p. 428 (Natal); *Sharpe, Layard's B. S. Afr.* p. 759 (1884); *Tristr. Cat. Coll. B.* p. 48 (1889).

Anas clypeata, part., *Schleg. Mus. P.-B.,* Anseres, pp. 33, 34 (specim. from S. Africa) (1866); *Gieb. Thes. Orn.* i. p. 348 (part.) (1872).

Anas capensis, part., *Gieb. Thes. Orn.* i. p. 346 (1872).

Spatula smithii, *Hartert, Kat. Vogelsamml.* p. 331, note 447 (1891).

Adult male. Upper part of the head dark brown, with the edges of the feathers dull greyish, producing a streaked appearance; sides of the head and upper part of the neck dull whitish grey, finely mettled with dark brown streaks; mantle and upper part of the back brown, with irregular undulated narrow bars; rump and upper tail-coverts dark brown, with a green gloss; lower parts dull greyish brown, thickly mottled with brown irregular markings; on the lower neck and crop-region the feathers are brown, with U-shaped rufescent bars; flanks brown, with narrow pale reddish-white irregular bars; upper wing-coverts smalt-blue; a white band anteriorly to the speculum, broader outwardly than inwardly; speculum dark metallic green, with a blue tinge towards the tip and on the outer edge of the secondaries; tertials dark metallic greenish blue, longer scapulars dark blue-green, more bluish on the outer web; under wing-coverts and axillaries white; the marginal under wing-covert brown, edged with white; tail blackish with a greenish tinge, the feathers with pale narrow edges: "iris lemon-yellow; bill deep reddish brown, almost black; legs, toes, and webs ochry yellow, but the latter are dusky towards the extremity" (*Andersson*). Total length 20 to 21 inches, wing 9·5, tail 3·7, culmen 2·35, tarsus 1·5.

Female. Similar to the female of *S. clypeata*, but easily distinguishable by the blue tinge of the speculum; besides it has the tail much darker brown, with irregular rufescent bars; the bill in dry skin is dark brown.

Hab. South Africa, north to Angola on the West, and Transvaal on the East; according to Lefebvre also Abyssinia, but this locality requires further proof.

a. ♀ ad. sk.	S. Africa.	Shelley Coll.
b. ♂ ad. sk.	Cape of Good Hope.	Sir A. Smith [P.]. (Type of species.)
c. ♀ ad. st.	Cape of Good Hope.	Purchased.
d. ♂ ad. sk.	Port Natal (*Ayres*).	Shelley Coll.
e. ♂ juv. sk.	Rio Coroca, Angola, Jan. (*Anchieta*).	Shelley Coll.

38. MALACORHYNCHUS.

Type.

Malacorhynchus, *Sw. Journ. Roy. Inst.* ii. no. iv. p. 18 (1831) ..... M. membranaceus.

Range. Confined to Australia and Tasmania.

1. Malacorhynchus membranaceus.

New Holland Duck, *Lath. Gen. Syn., Suppl.* ii. p. 359, n. 36 (1801).

Anas membranacea, *Lath. Ind. Orn. Suppl.* p. lxix, n. 4 A (1801); *Vieill. N. D.* v. p. 108 (1816); *Dum. Dict. Sc. Nat.* vi. p. 388 (1817); *Vieill. Enc. Méth.* i. p. 358 (1823); *Gieb. Thes. Orn.* i. p. 357 (1872).

Anas fasciata, *Shaw, Nat. Misc.* xvii. pl. 697 (1790–1813); *Less. Tr. d'Orn.* p. 632 (1831).

Membranaceous Duck, *Lath. Gen. Hist.* x. p. 331 (1824).

Rhynchaspis membranacea, *Steph. Gen. Zool.* xii. 2, p. 124 (1824).

Malacorhynchus membranaceus, *Sw. Journ. R. Inst.* ii. no. iv, p. 18 (with fig. of head) (1831); *G. R. Gr. List Gen. B.* p. 74 (1840); *id. op. cit.* 2nd ed. p. 94 (1841); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 139 (1844); *id. Gen. B.* iii. p. 618 (1845); *Gould, B. Austr.* vi. pl. 13 (pt. xviii., 1845); *Rchmb. Syn. Av.*, Natatores, t. 88. ff. 924–925 (1845); *G. R. Gr. Gen. B.*, App. p. 28 (1849); *Rchmb. Syn. Av.*, Natatores, t. 86. ff. 2332–33 (*ex Gould*) (1850); *id. Av. Syst. Nat.* p. ix (1852); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 81 (1856); *Zuchold, J. f. O.* 1858, p. 41 (Lynch River); *Gould, Handb. B. Austr.* ii. p. 372 (1865); *Rams. Ibis*, 1866, p. 335 (Port Denison); *Müll. P. Z. S.* 1869, p. 280 (Melbourne); *G. R. Gr. Hand-list*, iii. p. 85, n. 10681 (1871) (syn. emend.); *Sund. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 195, 216, 219 (1876); *Casteln. & Rams. ibid.* p. 386 (Gulf of Carpentaria) (1876); *Diggl. B. Austr.* ii. pl. 113 (1877); *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 661 (1878); *Sclat. P. Z. S.* 1880, p. 524; *Rams. Pr. Linn. Soc. N. S. W.* vii. p. 58 (1882); *Salv. Cat. B. Strickl. Coll.* p. 537 (1882); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Rams. Tab. List*, p. 22, n. 673 (1888); *North, Cat. Nests & Eggs Austr. B.* p. 344 (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 304 (1891).

Malacorhynchus fasciatus, *Wagl. Isis*, 1832, p. 1235.
Malacorhynchus membrinaceus, *Eyt. Mon. Anat.* p. 136 (1838) (syn. emend.); *id. Syn. Anat.* p. 92 (1869).
Malacorhynchus iodotis, *Less. Descr. Mamm. et Ois.* p. 246 (♂) (1847).
Anas iodotis, *Less.* (cf. *Schleg. Mus. P.-B.*, Anseres, p. 36).
Anas malacorhyncha, *Schleg.* (*nec Gm.*) *Mus. P.-B.*, Anseres, p. 36 (1866).
Malacorhynchus malacorhynchus, *Hartert* (*nec Gm.*), *Kat. Vogel-samml.* p. 232, n. 3426 (1891).

Adult male. Crown greyish brown; sides of the head and chin greyish white; a patch on the sides of the head, including the eyes, and a line from either eye uniting at the occiput and passing down the back of the neck, blackish brown; an oblong mark of rose-pink immediately behind the dark patch surrounding the eye; neck, breast, and underparts greyish white, crossed by numerous brown bars, narrow on the neck, broader on the breast and flanks, nearly obsolete on the centre of the abdomen; under tail-coverts whitish buff; back, scapulars, and upper wing-coverts greyish brown, minutely dusted with lighter points; rump and upper tail-coverts dark brown, the latter with a white band at the base; secondaries with a white band at the tip; primaries dark brown, the shorter ones tipped with white; under wing-coverts white, crossed with narrow brown bars; axillaries white; tail brown, the feathers slightly tipped with white: "irides dark reddish brown; bill varies from greenish grey to bluish olive; tip of the lower mandible white; tarsi and toes emerald-green in some specimens, and yellow-brown in others; webs dark brown" (*Gould*). Total length about 17 inches, wing 7·15, tail 2·5, culmen 2·5 to 2·65, tarsus 1·25.

Female. Similar to the male, but somewhat smaller; according to Eyton it wants the pink spot behind the eye, but I have found it in all the females examined.

Hab. Australia, except perhaps the most northern part; Tasmania.

a, *b*, *c*. Ad. sk.	Australia.	Salvin-Godman Coll.
d. Ad. sk.	Australia.	Sir T. Mitchell [P.].
e, *f*, *g*. ♂ ♀ ad. sk.	N.W. Australia.	Capt. Bowyer Bower [P.].
h. Ad. sk.	New S. Wales.	Hume Coll.
i. Ad. sk.	New S. Wales.	Lord Leigh [P.].
k, *l*. ♂ ad. sk. et st.	S. Australia.	Sir G. Grey [P.].
m. Ad. sk.	S. Australia.	H. J. Elwes, Esq. [P.].
n, *o*, *p*. Ad. sk.	S. Australia.	Gould Coll.
q, *r*. Ad. sk.	S. Australia.	Capt. Sturt [P.].
s. ♀ [head].	S. Australia.	E. Bartlett, Esq. [P.].
t. Ad. st.	Tasmania.	R. Gunn, Esq. [P.].

39. MARMARONETTA.

Type.

Marmaronetta, *Rchnb. Av. Syst. Nat.* p. ix (1852).. M. angustirostris.
Marmonetta (*errore*), *Martens, J. f. O.* 1868, p. 67; *G. R. Gr. Hand-list*, iii. p. 84 (1871).

Range. From the basin of the Mediterranean to India.

1. Marmaronetta angustirostris.

Anas angustirostris, *Ménétr. Cat. Rais. Cauc.* p. 58, n. 205 (Lenkoran) (1832); *Less. Compl. de Buff., Ois.* 2nd ed. p. 722 (1838); *K. & B. Wirbelth. Eur.* p. lxxxv (Anmerk.) (1840); *Schleg. Rev. Crit.* p. cxiii (1844); *Homeyer, J. f. O.* 1863, B, p. 26; *Schleg. Mus. P.-B.*, Anseres, p. 63 (1866); *Smith, Ibis*, 1868, p. 456 (Portugal); *Sharpe & Dress. B. of Eur.* vi. p. 479, pl. 423 (pt. 13, 1872); *Gieb. Thes. Orn.* i. p. 344 (1872); *Wright, Ibis*, 1874, p. 229 (Malta); *Irby, Orn. Str. Gibr.* p. 199 (1875) (Morocco); *Gurn. Rambles of a Natural.* p. 226 (Egypt) (1876); *Blanf. East. Pers.* ii. p. 301 (Baluchistan) (1876); *Seebh. Ibis*, 1883, p. 34 (Caucasus); *Scully, J. A. S. B.* lvi. p. 88 (1884); *Tristr. Faun. & Flor. of Palest.* p. 115 (Palestine and Egypt) (1884); *Tait, Ibis*, 1887, p. 376 (Portugal); *Koenig, J. f. O.* 1888, p. 285 (Tunis); *Pleske, Rev. Tarkest. Ornis*, p. 55 (Tschinas) (1888); *Guillem. Ibis*, 1889, p. 216; *Lilf. ibid.* p. 345 (Cyprus); *Tristr. Cat. Coll. B.* p. 49 (1889); *Evans, Ibis*, 1891, p. 72 (incubation); *Hartert, Kat. Vogelsamml.* p. 230 (1891); *Řiha, Orn. Jahrb.* iii. p. 260 (Bohemia) (1892); *Sclat. P. Z. S.* 1893, p. 776 (Spain, Zool. Gard.).

Anas (Fuligula) marmorata, *Temm. apud Gould, B. of Eur.* v. pl. 373 (pt. ix., 183—?).

Anas marmorata, *Gould, P. Z. S.* 1836, p. 59 (N. Africa); *Temm. Man. d'Orn.* 2nd ed. iv. p. 544 (Sardinia) (1840); *Werner, Atlas*, Palmipèdes, pl. 493 (18—?); *K. & B. Wirbelth. Eur.* p. lxxxv (Anmerk.) (1840); *Cara, Orn. Sarda*, p. 190 (Sardinia) (1842); *Buvry, J. f. O.* 1857, p. 123 (Algeria); *Bolle, ibid.* p. 348 (Canaries, breeding); *Powys, Ibis*, 1860, p. 353 (Ionian I.; Tunis); *Tristr. ibid.* p. 372; *id. P. Z. S.* 1864, p. 453 (Palestine); *Bree, B. of Eur.* iv. p. 156, with plate (1867); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Saund. Ibis*, 1869, p. 171 (Spain), 1871, p. 396 (S. Spain); *Hume, Ibis*, 1872, p. 468 (Scinde); *Brooke, Ibis*, 1873, p. 343; *Danf. & Harvie-Brown, Ibis*, 1875, p. 430; *Seeb. Ibis*, 1882, p. 229 (Astrakan); ? *Chapm. Ibis*, 1884, p. 90 (Spain); *Reiser, Verh. z.-b. Ges. Wien*, xl. p. 4 (Herzegovina) (1890); *id. Orn. Jahrb.* i. pp. 108, 109, Taf. i. (1890).

Dafila marmorata, *Eyt. Mon. Anat.* p. 114 (1838); *Bp. Comp. List*, p. 56, n. 410 (1838); *id. Syn. Anat.* p. 66 (1869).

Querquedula angustirostris, *Bp. Comp. List*, p. 57, n. 415 (1838); *Durazzo, Ucc. Lig.* p. 79 (Sardinia) (1840); *Bp. Icon. Faun. Ital.* i. *Ucc.* tav. 47. ff. 1, 2, *Introd.* p. 17 (1841); *id. Atti Riun. Sc. Ital. Firenze*, 1841, p. 317; *id. Cat. Met. Ucc. Eur.* p. 71, n. 435 (1842); *id. Isis*, 1843, pp. 403, 404; *G. R. Gr. Gen. B.*, App. p. 28 (1849); *Degl. Orn. Eur.* p. 435, sp. 467 (1849); *Bp. Rev. Crit.* pp. 104, 193 (1850); *Rchnb. Syn. Av.*, Natatores, t. 90. ff. 2341–42 (*ex Bp.*), t. 91. f. 2652 (*ex Gould*) (1850); *Vidal, Mem. d. Madr. Ac.* 1851, p. 196 (Spain); *Brehm, Vogelf.* p. 375 (1855); *Bolle, J. f. O.* 1855, p. 314 (Spain); *Salvad. Cat. Ucc. Sard.* p. 106 (1864); *id. J. f. O.* 1865, p. 323; *Cara, Osserv. Cat. Ucc. Sard.* p. 121 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 528 (1867); *Doderl. Avif. Sicil. e Mod.* p. 264 (1869); *Elwes & Buckl. Ibis*, 1870, p. 340 (Albania); *Hume, Str. Feath.* i. p. 262 (Sindh) (1873); *Anders. Str. Feath.* iii. p. 273 (Doab, Oudh) (1875); *Savi, Orn. Ital.* iii. p. 50 (1876); *Hume & Marsh. Game B. of Ind.* iii. p. 237, pl. 31 (1880); *Reid, Str. Feath.* x. p. 82 (Lucknow) (1881); *C. Swinh. Ibis*, 1882, p. 124; *Arevalo, Aves de España,*

p. 386 (1887); *Salvad. Ibis*, 1888, p. 323; *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 92 (1889).

Marmaronetta angustirostris, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Bp. Compt. Rend.* xliii. p. 650, n. 111 (1856); *Loche, Cat. Mamm. et Ois. Algér.* p. 142 (Algeria) (1858); *Salvad. Faun. d'Ital., Ucc.* p. 263 (1872); *Sclat. P. Z. S.* 1880, p. 520; *Gigl. Ibis*, 1881, p. 214 (Italy); *id. El. Ucc. Ital.* p. 87, n. 326 (1881); *Salv. Cat. B. Strickl. Coll.* p. 534 (1882); *Gigl. Avif. Ital.* p. 309 (1886); *Salvad. El. Ucc. Ital.* p. 262 (1886); *St. John, Ibis*, 1889, p. 179 (Afghanistan); *Gigl. Primo Resoc. Inch. Orn. Ital.* i. p. 477 (1889); *Carruccio, Boll. Soc. Rom.* ii. pp. 1–14 (1893); *Gigl. Icon. Avif. Ital.* fasc. lii. sp. & tav. 356 (1893); *Koenig, J. f. O.* 1893, p. 95.

? Anas cypria, *Unger u. Kotschy, Die Insel Cypern* (1865); *A. Müll. J. f. O.* 1879, p. 392, n. 108; cf. *Ibis*, 1889, p. 346.

Marmonetta angustirostris, *Mart. J. f. O.* 1868, p. 67; *Sundev. Meth. nat. Av. disp. Tent.* p. 147 (1872); *Bogdan. Birds of the Cauc.* (in Russian), p. 173 (1879); *id. Mamm. & B. of Middle and Lower Volga* (in Russian), p. 149 (18—?): (cf. *Radde, Ornis Caucas.* p. 455).

Chaulelasmus (Marmonetta) angustirostris, *G. R. Gr. Hand-list*, iii. p. 84, n. 10675 (1871).

Chaulelasmus angustirostris, *Heugl. Orn. N.O.-Afr.* ii. 1, p. 1329 (1873), ii. 2, p. cc (1873); *id. J. f. O.* 1874, p. 54; *Hume, Str. Feath.* vii. pp. 493, 523 (Lower Bengal) (1879), viii. p. 115, n. 961 bis (1879); *id. Nests & Eggs Ind. B.* (*Oates' ed.*), iii. p. 291 (1890).

Querquedula marmorata, *Dress. P. Z. S.* 1872, p. 605 (eggs, Seville).

Chauliodes angustirostris, *Radde, Ornis Caucas.* p. 455 (1884).

Marble Duck, *McLeod, Str. Feath.* x. p. 168 (Firoza, Indus Valley) (1881).

Marbled Teal, *Hume, Str. Feath.* x. p. 174 (Gurgaon) (1881).

Marmaronetta marmorata, *Blas. Ver. f. Naturwiss.* (*Braunschw. Tagebl.* 14. 3. 94) (Lech, near Munich); cf. *Ibis*, 1894, p. 453; *Sclat. ibid.*

Adult male. General plumage greyish, mottled and marbled with greyish brown; head pale greyish, the upper part and the long occipital crest barred with dark brown; a brown patch across the eyes covers the periophthalmic region; cheeks and throat whitish, minutely streaked with brown; upper parts greyish brown, each feather with greyish-buff spot at the tip, rump-feathers brown with paler edges; underparts greyish white, with brown bars, more distinct on the breast, flanks, and under tail-coverts; on the lower breast and abdomen the bars are almost obsolete; upper wing-coverts brownish grey; secondaries paler grey, forming an additional speculum; primaries brown, silky grey on the outer web; under wing-coverts white, the marginal ones more or less pale brown; axillaries white, barred with pale brown towards the tip; tail greyish brown, the tips and the edges of the feathers whitish: irides brown; bill bluish grey, black on the culmen and tip: legs and feet horny brown, with webs black. Total length about 18·5 inches, wing 8·1 to 8·5, tail 3·6, bill 1·77 to 1·85, tarsus 1·44 to 1·52.

Female. Similar to the male, but smaller, the eye-patch and

generally all the markings and tints duller and less conspicuous; the occipital crest shorter. Total length 16·9 to 17·5 inches.

Young. Similar to the female, but all the markings and tints still duller; the lower parts almost uniform dull pale greyish.

Hab. From the Canaries, Portugal, and Spain, through Northern Africa, Palestine, Persia, and Caucasus to India; apparently also in the Seychelles; it straggles into Southern Europe, and also into Bohemia.

a. Pull. st.	[Europe.]	Purchased.
b. ? ♀ ad. sk.	Santa Olaya, Seville, Spain, May.	H. Saunders, Esq. [C.].
c. ♀ ad. sk.	Near Seville, Spain, Nov. (*H. Saunders*).	Shelley Coll.
d. ♂ ad. sk.	Malaga, Spain, Sept. (*H. S.*).	Tweeddale Coll.
e, *f*. Ad. et juv. sk.	Morocco.	Tweeddale Coll.
g. Ad. st.	Tangier.	E. Wilson, Esq. [P.].
h, *i*. Ad. st.	Tunis.	Fraser Coll.
k, *l*. ♂ ♀ ad. sk.	Seychelles, April.	Shelley Coll.
m, *n*. Juv. sk.	Mesopotamia (*Comm. Jones*).	Euphrates Exp. [C.].
o. Ad. sk.	Mesopotamia (*Comm. Jones*).	India Museum [P.].
p. ♀ ad. sk.	Babylon (*Comm. Jones*).	India Museum [P.].
q. Ad. sk.	Bagdad.	Kenneth Loftus, Esq. [P.].
r. Ad. sk.	Bala Morghab (*Aitchison*).	Afghan Delimitation Comm. [P.].
s. ♀ ad. sk.	Kandahar, March.	Lt.-Col. Swinhoe [P.].
t. Ad. sk.	Sindh.	Hume Coll.
u–*b'*. ♂ ♀ ad. sk.	Hamal Mehur, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
c', *d'*, *e'*. ♂ ♀ ad. sk.	Dostalle, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
f'–*k'*. ♂ ♀ ad. sk.	Guybee Dehra, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
l'. ♀ ad. sk.	Roree District, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
m', *n'*. ♂ ♀ ad. sk.	The Gāg, Sehwan, Sindh, Jan. (*A. O. H.*).	Hume Coll.
o'. ♀ juv. sk.	Karachi, Sept. (*E. A. Butler*).	Hume Coll.
p', *q'*. ♂ ad. sk.	Sandee, March (*A. Anderson*).	Seebohm Coll.
r'. ♂ ad. sk.	Gurgaon, April (*W. N. Chill*).	Hume Coll.
s'. ♂ ad. sk.	Calcutta, Dec. (*A. O. H.*).	Hume Coll.
t'. Skeleton.	Specimen in confinement.	Lord Lilford [P.].
u', *v'*. Sterna, with shoulder-girdles.	Algeria.	
w', *x'*. Sterna, with shoulder-girdles.		
y', *z'*. Tracheæ.		

40. STICTONETTA *.

Type.
Stictonetta, *Rchnb. Av. Syst. Nat.* p. ix (1852) ..... S. nævosa.

Range. Confined to Australia.

1. Stictonetta nævosa.

Anas nævosa, *Gould, P. Z. S.* 1840, p. 177 (W. Australia); *id. B. Austr.* vii. pl. 10 (pt. v., 1841); *Sclat. P. Z. S.* 1864, p. 192; *Schleg. Mus. P.-B.*, Anseres, p. 63 (1866); *Müll. P. Z. S.* 1869, p. 280; *Gieb. Thes. Orn.* i. p. 358 (1872) (China!); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 195, 216, 219 (1876); *Rchnw. Orn. Centralbl.* 1882, p. 19.

Tadorna nævosa, *G. R. Gr. List B. Brit. Mus.* iii. p. 132 (1844); *id. Gen. B.* iii. p. 613, n. 3 (1845); *Rchnb. Syn. Av.*, Natatores, t. 93. f. 431 (*ex Gould*) (1845).

Stictonetta nævosa, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Bp. Compt. Rend.* xliii. p. 649, n. 79 (1856); *Sclat. P. Z. S.* 1864, p. 192; *Gould, Handb. B. Austr.* ii. p. 367 (1865); *G. R. Gr. Hand-list*, iii. p. 80, n. 10620 (1871); *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 200, n. 656 (1878), iii. p. 154 (trachea) (1878); *Sclat. P. Z. S.* 1880, p. 513; *Morton, Pr. R. Soc. Tasm.* 1884, p. lxxii (Tasmania) (cf. *Ibis*, 1884, p. 472) (1885); *Legge, Pr. R. Soc. Tasm.* 1886, p. 244 (Tasmania) (1887); *Rams. Tab. List*, p. 22, n. 667 (1888); *North, Cat. Nests & Eggs Austr. B.* p. 340 (1889); *Tristr. Cat. Coll. B.* p. 50 (1889); *Hartert, Kat. Vogelsammn.* p. 228 (1891); *Harting, Ibis*, 1894, p. 297 (Gippsland).

Adult. The whole of the plumage is dark brown, blacker on the anterior part of the head, minutely freckled and spotted with irregular oblong marks or bars of white, tinged with buffish on the upper parts; the under surface the same, but whiter, the ground-colour being white, and the freckles and bars brown; under tail-coverts almost regularly barred with brown; wings without speculum; primaries plain brown; secondaries spotted like the upper parts and besides towards the tip they have distinct white bands; under wing-coverts white, irregularly marked with brown; axillaries pure white: "irides light brown; bill greenish grey, becoming much darker at the tip; legs bluish green" (*Gould*). Total length 17·5 inches, wing 9, tail 3, culmen 2·2, tarsus 1·8.

Female. Similar to the supposed male, but perhaps less black on the face.

Hab. Southern and Western Australia, and Tasmania.

a–d.	Ad. sk.	Australia (*Cockerell & Thorpe*).	Salvin-Godman Coll.
e, f.	Ad. sk.	New South Wales.	Australian Museum [E.].
g, h.	Ad. sk.	Interior of New South Wales.	Lord Leigh [P.].
i.	♀ ad. sk.	Gipps Land Lakes, Victoria (*E. Curtis*).	J. E. Harting, Esq. [P.].
k, l.	Ad. sk.	S. Australia.	Sir G. Grey [P.].

* Systematic position very uncertain. Nail of the bill bent backwards as in *Erismatura*! Bill rather long, at the base much compressed and very high, rather broad towards the tip; the edge of the upper mandible furnished towards the tip with lamellæ prominent horizontally; culmen very concave, as in *Tadorna cornuta*. No wing-speculum. Tail very short.

41. HETERONETTA.

Type.

Heteronetta, *Salvad. Atti Soc. Ital. Sc. Nat.* viii.p. 574 (1865) ..... H. atricapilla.

Range. Confined to the southern part of South America.

1. Heteronetta atricapilla.

Pato cabeza negra, *Azara, Apunt.* iii. p. 447, n. 438 (1805).

Canard à tête noire, *Azara, Voy.* (*Sonn. ed.*) iv. p. 347 (1809); *Wied, Beitr.* iv. p. 932 (1832).

Anas melanocephala, *Vieill.* (*nec Gm.*) *N. D.* v. p. 163 (1816) (*ex Azara*); *id. Enc. Méth.* i. p. 354 (1823); *G. R. Gr. Gen. B.* iii. p. 616, n. 18 (1845); *Hartl. Ind. Azar. Apunt.* p. 28, n. 438 (1847); *Bp. Compt. Rend.* xliii. p. 649, n. 75 (1856); *Cass. U.S. Astron. Exp.* ii. p. 202, pl. xxv. (1856); *Burm. Syst. Ueb. Thier. Bras.* iii. p. 439 (note) (1856); *Pelz. Reise Novara, Vög.* p. 138 (Chili) (1865); *Sclat. P. Z. S.* 1867, p. 335 (Chili); *Phil. & Landb. Cat. Av. Chil.* p. 42 (1868); *Pelz. Orn. Bras.* pp. 320 (note), 459 (1870); *Gieb. Thes. Orn.* i. p. 356 (1872); *Burm. P. Z. S.* 1872, p. 370; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 129 (1873); *Durnf. Ibis*, 1878, p. 64 (Buenos Ayres).

Anas atricapilla, *Merrem, in Ersch u. Grub. Enc.* sect. i, vol. xxxv. p. 26 (1841).

Anas nigriceps, *Licht. in Mus. Berol.*; *id. Nomencl. Av.* p. 101 (Montevideo) (1854).

Heteronetta melanocephala, *Salvad. Atti Soc. Ital. Sc. Nat.* viii. p. 574 (1865); *id. J. f. O.* 1870, p. 67; *G. R. Gr. Hand-list*, iii. p. 83, n. 10655 (1871); *Sclat. & Salv. P. Z. S.* 1876, p. 382; *Sclat. P. Z. S.* 1880, p. 520; *id. Argent. Orn.* ii. p. 130 (1889); *Holland, Ibis*, 1891, p. 19 (Argentina), 1892, p. 206; *Berkel. James, New List Chil. B.* p. 9, n. 149 (1892).

Fuligula melanocephala, *Schleg. Mus. P.-B.*, Anseres, p. 32 (1866).

Nyroca melanocephala, *Eyt. Syn. Anat.* p. 118 (Chili) (1869).

Fuligula nigroceps, "*Vieill.*," *Eyt. l. c. in the synonymy.*

Adult. Head and upper part of the neck black; chin white; back or upper parts blackish brown, minutely vermiculated with pale rufous; below dirty whitish, but the base of the feathers dusky brown; sides, flanks, and under tail-coverts rufous brown, freckled with blackish; no wing-speculum, the tips of the greater coverts white, a white band at the tip of the secondaries; also the shorter primaries edged with white at the tip; primaries and tail-feathers blackish; under wing-coverts, except the greater which are grey, and axillaries white: "bill blackish, with a basal spot on each side flesh-colour; feet horny brown" (*Sclater*). Total length about 14·5 inches, wing 7, tail 2·3, culmen 1·75, tarsus 1·12.

Female. "Similar, but the head like the back, cheeks brown, freckled with black, and throat and superciliary stripe whitish" (*Sclater*): "upper mandible dark horn, side base with a tinge of yellowish red; legs and feet pale slate, webs darker; irides wood-brown" (*Durnford*).

Hab. Rio Grande do Sul (*Wied*); Uruguay, Argentina, and Chili.

a. ♀ ad. sk.	Alvear, Buenos Ayres, Sept.	H. Durnford, Esq. [P.].
b, c. ♂ ♀ ad. sk.	Mendoza, Argentine Republic (*E. C. Reed*).	Purchased.
d, e. ♂ ♀ ad. sk.	Mendoza, Feb. (*Weisshaupt*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Mendoza, Feb.	H. J. Elwes, Esq. [P.].
g. ♂ ad. st.	Chili.	E. Wilson, Esq. [P.].
h. ♀ ad. st.	Chili.	Purchased.
i, k. ♂ ♀ ad. sk.	Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	Rio Pilmaiquen, Chili, Feb.	H. Berkeley James, Esq. [P.].

Subfamily VIII. FULIGULINÆ.

Key to the Genera.

a. Primaries not uniform dark brown, or blackish, but partly whitish, with the tip brown; the first three or four primaries brown also on the outer web; bill rather long, broad, and flat.
  a'. Indentations of the upper mandible prominent; head of the male fully crested ..... 42. NETTA, p. 327.
  b'. Indentations of the upper mandible not prominent.
    b''. Bill gibbous at the base; outline of loral feathering straight, and inclined backwards ..... 43. METOPIANA, p. 332.
    c''. Bill smooth, not gibbous at the base.
      c'''. Bill not distinctly wider near the end than at the base, neither very broad or short ..... 44. NYROCA, p. 334.
      d'''. Bill somewhat wider near the end than at the base, rather broad and short, and much more rounded at the tip than in *Nyroca*; head in adult males glossy black ..... 45. FULIGULA, p. 354.
b. Primaries uniform dark brown, or blackish.
  c'. Central tail-feathers narrow, short and curled up; bill very strong; wings very short, often useless for flight ..... 46. TACHYERES, p. 373.
  d'. Central tail-feathers not curled up.
    d''. No stiff feathers on the head of the adult males.
      d'''. General plumage of the males not black.
        *d*⁴. Head fully crested; bill strong and thick.
          *d*⁵. Tail moderate, the feathers somewhat rounded at the tip;

edges of the upper mandible not bent inwardly; males with a glossy head, females with a brown head ..... 47. CLANGULA, p. 376.

e^5. Central tail-feathers of the male very long and pointed; edges of the upper mandible partly bent inwardly ..... 48. HARELDA, p. 388.

e^4. Head smooth, not distinctly crested: bill conical, almost tapering to a point ..... 49. COSMONETTA, p. 394.

e'''. General plumage of males deep black, of the females greyish brown, but not barred ..... 50. ŒDEMIA, p. 399.

e''. Some patches of stiff feathers on the head of the males.

f'''. Upper mandible fringed with a soft skin towards the tip; lower mandible with apical portion flat and spatulated ..... [p. 416. 51. CAMPTOLÆMUS,

g'''. Upper mandible not fringed with a soft skin towards the tip; bill rather narrow and pointed; tertials more or less falcate, especially in the males; females barred with rufous and black.

g^4. Edges of upper mandible bent inwardly; lower mandible with the apical portion flat and almost spatulated; male and female with a metallic speculum ..... [p. 418. 52. HENICONETTA,

h^4. Edges of upper mandible not bent inwardly.

h^5. Feathering of forehead continuous with that of lores, and advancing quite to the nostrils; a pad of feathers encircling the eyes ..... 53. ARCTONETTA, p. 422.

i^5. Feathering of forehead separated from that of lores by the interposition on each side of a more or less extensive naked angle; no pad of feathers encircling the eyes ..... 54. SOMATERIA, p. 423.

42. NETTA.

	Type.
Branta, *Boie*, *Isis*, 1822, p. 564 (*nec Scop.* 1769, *neque Oken*, 1815)	N. rufina.
Netta, *Kaup*, *Natürl. Syst.* p. 102 (1829)	N. rufina.
Callichen, *Brehm*, *Isis*, 1830, p. 999; *id. Handb. Naturg. Vög. Deutschl.* p. 921 (1831)	N. rufina.
Mergoides, *Eyt. Cat. Brit. B.* p. 57 (1836)	N. rufina.

Range. From the Basin of the Mediterranean to Turkestan and Northern India.

1. Netta rufina.

Anas fistularis cristata, *Briss. Orn.* vi. p. 398 (1760).

Anas rufina, *Pall. Reise,* ii. App. p. 713, n. 28 (1773); *id. Spicil. german.* vi. tab. 5 (♂ & ♀); *Gm. S. N.* i. 2, p. 541, n. 118 (1788); *Lath. Ind. Orn.* ii. p. 870, n. 94 (1790); *Bonn. Enc. Méth.* i. p. 128 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 253, tab. lxxix. (1811); *Temm. Man. d'Orn.* p. 560 (1815); *Vieill. N. D.* v. p. 154 (1816); *Dum. Dict. Sc. Nat.* vi. p. 367 (1817); *Temm. Man.* 2nd ed. ii. p. 864 (1820); *Licht. Verz. Doubl.* p. 85 (1823); *Ranz. El. di Zool.* iii. pt. 9, p. 126 (1826); *Yarrell, Tr. Linn. Soc.* xv. 2, pp. 387, 391, tab. xv. f. e (trachea) (1827); *Less. Tr. d'Orn.* p. 632 (1831); *Ménétr. Cat. Rais. Cauc.* p. 57 (Bakou) (1832); *Temm. Man. d'Orn.* 2nd ed. iv. p. 544 (1840); *Schleg. Rev. Crit.* p. cxxi (1844); *Naum. Vög. Deutschl.* xii. p. 7, Taf. 307 (1844); *Brehm, J. f. O.* 1854, p. 84 (Egypt); *Pässl. ibid.* p. 380; *Müll. J. f. O.* 1856, p. 232 (Provence); *Costa, Fauna Regno di Nap., Ucc.* pt. ii. p. 33, t. xiv. (1857); *Münchausen, Naumannia,* 1857, pp. 239–330; *Bolle, J. f. O.* 1858, p. 227 (Canaries?); *Tristr. Ibis,* 1859, p. 161; *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 304 (1860); *Preen, J. f. O.* 1863, p. 282 (Mecklenburg); *Gieb. Thes. Orn.* i. p. 361 (1872).

Anas cinerea, *S. G. Gmel. Reise Russl.* ii. p. 184, tab. 18 (♀) (1774).

Fischione col ciuffo, *Gerini, Stor. degli Ucc.* v. tav. 587 (1776).

Anas ruficeps, *Pall. Vet. Acad. Handl.* xl. p. 28 (1779).

Canard siffleur huppé, *D'Aubent. Pl. Enl.* 928.

Siffleur huppé, *Buff. Hist. Nat. Ois.* ix. p. 182 (1783).

Red-crested Duck, *Lath. Syn.* ii. 2, p. 544, n. 82 (1785).

Anas sjurakan, *De Brujn, It. Moscov.* p. 336, tab. n. 182. f. D.

Canard de Steller (*errore*), *Bonn. Enc. Méth.* i. pl. 36. f. 3 (♂ & ♀) (1790).

Branta rufina, *Boie, Isis,* 1822, p. 564; *Bp. Icon. Faun. Ital. Introd.* p. 17 (1841); *Bp. Cat. Met. Ucc. Eur.* p. 73 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 142 (1844); *id. Gen. B.* iii. p. 620 (1844); *Rchnb. Syn. Av.*, Natatores, t. 76. ff. 116–118 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 146 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 306, n. 1784 (1849); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Licht. Nomencl. Av.* p. 102 (1854); *Bolle, J. f. O.* 1855, p. 314 (Spain); *Brehm, ibid.* p. 369; *Salv. Ibis,* 1859, pp. 358, 363 (E. Atlas); *Irby, Ibis,* 1861, p. 250 (Oudh); *Selat. P. Z. S.* 1862, p. 163 (Argyllshire); *G. R Gr. Cat. Hodgs. Coll. B. Mus.* 2nd ed. p. 77 (1863); *id. Cat. Brit. B.* p. 198 (1863); *Jerd. B. of Ind.* iii. p. 811 (1864); *Salvad. Cat. Ucc. Sard.* p. 109 (1864); *id. J. f. O.* 1865, p. 325 (Sardinia); *Gould, B. Gr. Brit.* v. pl. 22 (pt. xi., 1867); *Degl. & Gerbe, Orn. Eur.* ii. p. 530 (1867); *Bcav. Ibis,* 1868, p. 402; *Elwes & Buckl. Ibis,* 1870, p. 340 (Turkey); *Baldam. J. f. O.* 1870, p. 278 (Mausfelder See); *Salvad. Faun. d'Ital., Ucc.* p. 264 (1872); *Holdsw. P. Z. S.* 1872, p. 480; *Fritsch, J. f. O.* 1872, p. 370 (Bohemia); *Layard, P. Z. S.* 1873, p. 208 (Ceylon); *Lilford, Ibis,* 1875, pp. 16, 26; *Blyth, B. of Burm.* p. 166 (Bhamo) (1875); *Scully, Str. Feath.* iv. p. 201 (E. Turkestan) (1876); *Fritsch, J. f. O.* 1876, p. 79; *Savi, Orn. Ital.* iii. p. 58 (1877); ? *Bidd. Ibis,* 1881, p. 100 (Gilgit?); *Hume & Marsh. Game B. of Ind.* iii. p. 253, pl. 34 (1880); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 90 (1889); *id. Sec. Yark. Miss., Aves,* p. 129 (1891).

Fuligula rufina, *Steph. Gen. Zool.* xii. 2, p. 188, pl. 54 (♂) (1824); *Savi, Orn. Tosc.* iii. p. 137 (1831); *Sykes, P. Z. S.* 1832, p. 169 (Dukhun); *Gould, B. Eur.* v. pl. 369 (1837); *Jerd. Madr. Journ.* xii. p. 221, n. 389 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxvii, 231 (1840); *Ewer, P. Z. S.* 1842, p. 93; *Blyth, ibid.* p. 94 (India); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Layard, Ann. & Mag. N. H.* xiv. p. 269 (Ceylon?) (1854); *Costa, Faun. Regn. Nap., Ucc.* pt. i. p. 78 (1857); *Adams, P. Z. S.* 1858, p. 510 (Punjab); *Tristr. Ibis*, 1860, pp. 163, 372 (E. Algeria); *Powys, Ibis*, 1860, p. 354 (Ionian I.); *Simpson, Ibis*, 1860, p. 394; *Schleg. Mus. P.-B.*, Anseres, p. 25 (1866); *Saund. Ibis*, 1869, p. 397 (Sicily, breeding), 1870, p. 397 (S. Spain); *G. R. Gr. Hand-list*, iii. p. 85, n. 10683 (1871); *Tayl. Ibis*, 1872, p. 233 (Crimea); *Dress. B. of Eur.* vi. p. 559, pl. 435 (pt. xxii., 1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1335 (1873); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Dress. Ibis*, 1876, p. 421; *Blanf. East. Pers.* p. 301 (1876); *Forbes, P. Z. S.* 1877, p. 312 (bursa Fabricii); *Hume, Str. Feath.* viii. p. 111, n. 967 (1879); *Legge, B. of Ceyl.* p. 1087 (note) (1880); *Sclat. P. Z. S.* 1880, p. 524; *Payne-Gallwey, Zoolog.* 1881, p. 143 (Ireland); *More, P. Z. S.* 1881, p. 409 (Ireland); *Ridgw. Bull. U.S. Nat. Mus.* no. 21, p. 85 (Long Island) (1881); *id. Pr. U.S. Nat. Mus.* x. p. 23 (Long Island) (1881); *Allen, Bull. Nutt. Club*, vi. p. 173 (1881); *C. Swinh. Ibis*, 1882, p. 125 (Kandahar); *Coues, Check-list*, 2nd ed. p. 130, n. 886 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 46 (1882); *Salv. Cat. B. Strickl. Coll.* p. 537 (1882); *B. O. U. List Brit. B.* p. 128 (1883); *Sclat. List Vert. An.* 8th ed. p. 440 (1883); *B., B., & R. Water-B. N. Am.* ii. p. 15 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 700 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 407 (1884–85); *Seeb. Hist. Brit. B.* iii. p. 567, pl. 64 (egg) (1885); *Macphers. Zoolog.* 1886, p. 489 (young in down); *Lilford, Col. Fig. Brit. B.* pt. x. pl. — (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Rchnw. J. f. O.* 1890, p. 83; *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Oust. Nouv. Arch. du Mus.* (3) vi. p. 102 (Turkestan) (1894); *Clarke, Ibis*, 1894, p. 549 (Camargne).

Platypus rufinus, *Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 826 (1824); *Püssler, J. f. O.* 1856, p. 67 (Anhalt).

Anas (Fuligula) rufina, *Less. Man. d'Orn.* ii. p. 415 (1828).

Netta rufina, *Kaup, Natürl. Syst.* p. 102 (1829); *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 355 (1885); *A. O. U. Check-list N. Am. B.* p. 118, n. [145] (1886); *Ridgw. Man. N. Am. B.* p. 100 (1887).

Callichen ruficeps, *Brehm, Isis*, 1830, p. 999, n. 1 (descr. nulla); *id. Vög. Deutschl.* p. 922 (1831).

Callichen rufinus, *Brehm, Isis*, 1830, p. 999, n. 2; *id. Vög. Deutschl.* p. 924 (1831); *Bp. Comp. List*, p. 58 (1838); *id. Icon. Faun. Ital.* i. tav. 47. f. 3 (fasc. xxx., 1841); *Bp. Compt. Rend.* xliii. p. 651, n. 144 (1856); *Homey. J. f. O.* 1862, p. 434 (Balearic Isl.); *Severtz. J. f. O.* 1873, p. 344, 1875, p. 185; *Radde, Ornis Caucas.* p. 463 (1884); *Salvad. El. Ucc. Ital.* p. 262 (1886).

Callichen subrufinus, *Brehm, Isis*, 1830, p. 999, n. 3 (descr. nulla); *id. Vög. Deutschl.* p. 924 (1831).

Callichen micropus, *Brehm, Isis*, 1830, p. 999, n. 4 (descr. nulla); *id. Vög. Deutschl.* p. 925 (1831).

? Fuligula, sp., *Sykes, P. Z. S.* 1832, p. 169 (Dukhun) (♀?).

Mergoides rufina, *Eyt. Cat. Brit. B.* p. 57 (1836); *id. Hist. Rarer Brit. B.* p. 77 (1836); *id. Syn. Anat.* p. 17 (1869).

Callichen rufinum, *Eyt. Mon. Anat.* p. 152 (1838).
Aythya rufina, *Macgill. Man. Brit. B.* p. 191 (1842).
Tadorna? pnoe, *Hodgs. Gray's Zool. Misc.* p. 86, n. 819 (♀) (1844).
Callichen rufescens, *Brehm, Voyelf.* p. 379 (1855).
Callichen rufina, *Bp. Compt. Rend.* xliii. p. 651, n. 144 (1856); *Loche, Cat. M. et O. Algér.* p. 144 (1858); *Tristr. Ibis*, 1860, p. 81 (N. Africa); *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872).
Fuligula ruficrista, *C. F. Dubois, Pl. Col. Ois. Belg.* iii. p. 277 (1860).
Callichen rufa (*errore*?), *Koenig, J. f. O.* 1888, p. 285 (Tunis).

Hybrids.

Fuligula rufina × Metopiana peposaca, *Sclat. P. Z. S.* 1880, p. 524.
Branta rufina ♂ × Anas boscas ♀, *Martorelli, P. Z. S.* 1891, p. 489.

Adult male. Head, throat, and sides of the upper neck reddish chestnut; the feathers on the top of the head much elongated, forming a conspicuous crest of a reddish-buff colour; back of the neck above and lower neck brown-black, changing on the breast, belly, and under tail-coverts into glossy brown; back greyish brown, darker on the lower part, and changing into brown-black on the rump and upper tail-coverts; scapulars pale brown; wing-coverts and tertials greyish, secondaries white, forming the wing-speculum, bordered near the tip by a grey-brown band; primaries whitish, but the tips and the outer webs of the first five greyish brown; under wing-coverts and axillaries white, the latter greyish at the tip; edge of the wing near the carpal joint white; a white patch almost hidden at the base of the scapulars; sides and flanks white, with an evanescent pinkish tinge, more or less undulated with brown lines anteriorly and posteriorly, the upper feathers brown-olive, and also the longer ones at the tip; at the base of the tail on the sides the feathers are black with a green gloss; tail-feathers greyish brown, the outer ones paler and more or less with lighter edges: bill crimson or vermilion-red; irides reddish brown; legs and toes vermilion-red, interdigital membrane blackish. Total length about 22 inches, wing 10, tail 4, culmen 1·9, tarsus 1·5.

Female. General colour greyish, browner on the upper parts, the rump blackish brown; upper part of the head, including the ocular region, brown; cheeks, throat, and sides of the neck greyish white; point of the wing-speculum greyish white, primaries grey, with the tip and outer webs brown; beak and legs reddish brown.

Young male similar to the female, but the darker centres of the feathers of the underparts are brown instead of grey; back and breast darker brown; and more indications of a crest (*Seebohm*).

Males in first nuptial dress have the underparts more suffused with brown, the white not suffused with pink, and the bill much paler (*Seebohm*).

Males in moulting plumage very closely resemble the adult females, but may be distinguished by the brighter colour of their

bills and eyelids, by the greater development of their crest, by the darker brown of the belly and under tail-coverts, and by the redder colour of the feet.

Young in down are described by Baldamus (J. f. O. 1870, p. 280) as having the upper parts dull olive-grey, with a buff spot on each shoulder, and the underparts buff; a buff stripe passes over each eye, and through the eye runs a dark stripe, which divides into two behind the eye.

Hab. Palæarctic Region, from the basin of the Mediterranean to the Black and Caspian Seas, and from there to Turkestan in summer, and India in winter; accidental visitor in the North of Europe; only once in N.E. America.

a. ♂ ad. st.	Great Britain.	
b. ♂ ad. st.	Milford Haven.	Earl of Cawdor [P.].
c–f. Pull. st. et sk.	Dulwich (born in captivity).	R. Hoffmann, Esq. [P.].
g. ♂ ad. sk.	Damietta, Egypt, Dec. (*Filipponi*).	Shelley Coll.
h, i. ♂ ad. et juv. sk.	Constantinople (*T. Robson*).	H. J. Elwes, Esq. [P.].
k, l. ♂ ♀ ad. sk.	Lenkoran.	Seebohm Coll.
m, n. ♂ ♀ ad. sk.	Bala Morghab, Jan. (*Aitchison*).	Afghan Delimitation Comm. [P.].
o. ♂ ad. sk.	Kandahar, March.	Lt.-Colonel Swinhoe [P.].
p. ♂ ad. sk.	India (*Blagrave*).	India Museum [P.].
q. ♀ ad. st.	India.	Bartlett Coll.
r. ♂ imm. st.	India.	Col. Cobb [P.].
s, t, u. ♂ ad., ♂ imm., et ♀ juv. sk.	R. Jhelum, Sindh, Nov. (*A. O. H.*).	Hume Coll.
v. ♀ ad. sk.	Muncha, Sindh, Jan. (*A. O. H.*).	Hume Coll.
w, x, y. ♂ ♀ ad. et ♂ imm. sk.	Sambhur, Dec., Jan., Feb. (*R. M. Adam*).	Hume Coll.
z. ♂ ad. sk.	Sirza.	Hume Coll.
a'. ♂ imm. sk.	Gurgaon, Feb. (*A. O. H.*).	Hume Coll.
b'–e'. ♂ ♀ ad. et juv. sk.	Delhi, Punjaub, Jan.	Hume Coll.
f'–m'. ♂ ♀ ad. et juv. sk.	Etawah, Jan.	Hume Coll.
n'. ♂ ad. sk.	Kheree District, Feb. (*A. Anderson*).	H. J. Elwes, Esq. [P.].
o', p'. ♂ ♀ imm. sk.	Futtehgurh, Dec. (*A. Anderson*).	Seebohm Coll.
q'–u'. ♂ ♀ ad. et juv. sk.	Oudh, Dec., Jan., Feb.	Hume Coll.
v', w'. ♂ ad. et juv. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
x', y'. ♂ ad. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
z'. ♂ ad. sk.	Bengal (*Falconer*).	India Museum [P.].
a''. ♀ ad. st.	Behar.	B. H. Hodgson, Esq. [P.].

b''. ♂ ad. sk.	Sambulpore Distr., Central Provinces.	Hume Coll.
c''. ♂ imm. sk.	Dinapore, Dec.	Hume Coll.
d''. ♂ ad. sk.	Raipur, Jan.	Hume Coll.
e'', *f''*, *g''*. ♂ ad. sk.	Calcutta, Dec. (*A. O. H.*).	Hume Coll.
h''. ♀ ad. sk.	Calcutta, Nov.	H. J. Elwes, Esq. [P.].
i'', *k''*. ♂ ad. sk.	Lob-nor, Feb., March (*Prjevalsky*).	Seebohm Coll.
l''. ♂ imm. st.	China.	J. R. Reeves, Esq. [P.].
m''. Skeleton (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].
n''. Skeleton (imperfect).	Volga.	Brandt Coll.
o''. Sternum.	England.	J. Ray, Esq. [P.].
p''. Sternum.		Purchased.

43. METOPIANA.

Type.

Metopiana, *Bp. Compt. Rend.* xliii. p. 649, gen. 26 (1856)..... M. peposaca.
Metopias, *Heine, Nom. Mus. Hein. Orn.* p. 347 (1890).

Range. Confined to South America.

1. Metopiana peposaca.

Pato negrizco ala blanca, *Azara, Apunt.* iii. p. 423, n. 430 (Paraguay and Buenos Ayres) (1805).

Anas peposaca, *Vieill. N. D.* v. p. 132 (1818); *id. Enc. Méth.* i. p. 357 (1823); *Hartl. Verz. Ges. Mus.* p. 119 (1844); *id. Ind. Azar. Apunt.* p. 27, n. 430 (1847); *Burm. J. f. O.* 1860, p. 267 (Paraná); *id. La Plata-Reise*, ii. p. 518 (1861); *Sclat. P. Z. S.* 1867, p. 687 (Zool. Gard.); *Gieb. Thes. Orn.* i. p. 359 (1872); *Bodinus, J. f. O.* 1876, p. 241 (Zool. Gard.).

Anas metopias, *Pöppig, Fror. Notiz.* xxxii. no. 529, p. 9 (1829); *id. Fragm. Zool. Itin. Chil.* p. 10 (1829); *cf. Bull. Sc. Nat.* 1829, p. 103; *Less. Compl. de Buff.* 2nd ed. p. 722 (1838).

Milouin en deuil, *Less. Tr. d'Orn.* p. 632, n. 41 (Brazil) (1831); *Pucher. Rev. et Mag. de Zool.* 1850, p. 636 (=A. peposaca); *Hartl. J. f. O.* 1855, p. 420.

Anas albipennis, *Licht. Mus. Berol., teste Meyen, Nova Acta*, xvi. *Suppl.* p. 119 (1833); *Licht. Nomencl. Av.* p. 101 (Montevideo) (1854).

Fuligula metopias, *G. R. Gr. List B. Brit. Mus.* iii. p. 143 (1844); *id. Gen. B.* iii. p. 621, n. 6 (1844); *Des Murs in Gay, Hist. de Chile*, i. p. 456 (1848); *Hartl. Naumannia*, 1853, pp. 217, 222 (Chili); *Cass. U.S. Astron. Exp.* ii. p. 204, pl. xxvii. (1856); *Phil. & Landb. Cat. Av. Chil.* p. 43 (1868).

Anas pesosaca (*errore*), *G. R. Gr. Gen. B.* iii. p. 616, n. 15 (1845).

Fuligula pesosaca (*errore*), *G. R. Gr. Gen. B.*, App. p. 28 (1849).

Fuligula albipennis, *Rchnb. Syn. Av.*, Natatores, t. cclxxxv. (94), f. 2350 (1850); *Bibra, Denkschr. Ak. Wien*, v. p. 132 (1853);

id. J. f. O. 1855, p. 57; *Pelz. Reis. Novara, Vög.* p. 139 (Chili) (1865).

Metopiana peposaca, *Bp. Compt. Rend.* xliii. p. 649, n. 76 (1856); *Sclat. & Salv. P. Z. S.* 1868, p. 146 (Conchitas); *Sclat. P. Z. S.* 1870, p. 666, pl. xxxvii. (Zool. Gard.); *G. R. Gr. Hand-list*, iii. p. 87, n. 10695 (1871); *Burm. P. Z. S.* 1872, p. 368 (Patagonia, Buenos Ayres, Paraná); *Garrod, P. Z. S.* 1873, p. 467 (carotids), p. 639 (muscles); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Salvin, Ibis*, 1874, p. 319; *Garrod, P. Z. S.* 1875, pp. 154–156, f. 6 (trachea); *Sclat. & Salv. P. Z. S.* 1876, p. 398; *Durnf. Ibis*, 1876, p. 163, 1877, p. 192 (Buenos Ayres), 1878, p. 65 (nest); *Sclat. P. Z. S.* 1880, p. 524; *White, P. Z. S.* 1882, p. 625 (Argentina); *Sclat. List Vert. An.* 8th ed. p. 439 (1883); *Barrows, Auk*, 1884, p. 274; *Berl. J. f. O.* 1887, p. 124; *Tristr. Cat. Coll. B.* p. 48 (1889); *Sclat. Argent. Orn.* ii. p. 137 (1889); *Kerr, Ibis*, 1890, p. 358; *Holland, ibid.* p. 427; *Hartert, Kat. Vogelsamml.* p. 231 (1891); *Holland, Ibis*, 1892, pp. 206, 208, 210; *Berk. James, New List Chil. B.* p. 10, n. 161 (1892); *Aplin, Ibis*, 1894, p. 201 (Uruguay).

Fuligula peposaca, *Schleg. Mus. P.-B.*, Anseres, p. 31 (1866); *Sclat. P. Z. S.* 1867, pp. 335, 340.

Metopias peposaca, *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 347 (1890).

Hybrid.

Fuligula rufina × Metopiana peposaca, *Sclat. P. Z. S.* 1880, p. 524; *Leverk. J. f. O.* 1890, p. 225.

Adult male. Above black, very finely striated with grey on the back and scapulars; sides of head and upper part of neck with a purple gloss; breast, like the neck, black; abdomen and flanks minutely vermiculated with pale grey and greyish brown; under tail-coverts white; wings black with a green gloss, edge of the wing and speculum on the secondaries white, the latter with a glossy black band at the tip; primaries white with the tips black, the four outer ones brown-black on the outer web, and grey on the outer part of the inner web; under wing-coverts white, except the marginal ones which are blackish; axillaries white, vermiculated with grey near the tip; tail brown-black, the outer feathers greyish: bill rosy red, with the tip and nail black; feet yellow; irides golden red. Total length about 12 inches, wing 10, tail 3, culmen 2·5, tarsus 1·6.

Female. Head, neck, sides of the breast, and flanks rufous-brown; crown of the head and occiput darker brown; back, scapulars, and wing-coverts dark brown, with an olive gloss; upper tail-coverts brown; chin and throat, and also a few feathers on the sides of the head at the base of the upper mandible, white; lower parts whitish, the base of the feathers brown; under tail-coverts white; edge of the shoulder grey; speculum on the secondaries grey, with a brown band at the tip; primaries brownish grey, with black tips, the first three or four blackish brown on the outer webs; under wing-coverts, like the axillaries, white, but the marginal ones brownish; tail brown: "bill bluish brown" (*Kew Gard.*).

Another specimen in the Turin Museum has the rufous-brown colour of the head, neck, and sides of body paler, and the whitish of the underparts tinged with ochreous.

Hab. Southern Brazil, Paraguay, Uruguay, Argentina, and Chili.

a. ♂ ad. sk.		Admiral Bowles[P.].
b. ♂ ad. st.	Chili.	Purchased.
c–e. ♂ ♀ ad. st. et ♀ ad. sk.	Chili (*T. Bridges*).	Cuming Coll.
f, g. ♂ ad. et ♂ juv. st.	Chili.	T. Bridges, Esq. [C.].
h. ♂ ad. sk.	Chili.	H. J. Elwes, Esq. [P.].
i, k. ♂ ♀ ad. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
l, m. ♂ ♀ ad. sk.	Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
n. ♀ ad. sk.	Santiago, Chili, Aug.	H. J. Elwes, Esq. [P.].
o. ♂ juv. sk.	Rio Pilmaiquen, Chili, Feb.	H. Berkeley James, Esq. [P.].
p. ♂ ad. sk.	Uruguay.	Alan Peel, Esq. [P.].
q, r. ♂ ♀ ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.

44. NYROCA.

	Type.
Nyroca, *Flem. Phil. of Zool.* ii. p. 260 (1822).....	N. africana.
Aythia, *Boie, Isis*, 1822, p. 564 (nomen nudum)	N. ferina.
Aithya, *Kaup, Natürl. Syst.* p. 99 (1829)	N. ferina.
Fuligula, *Sw.* (*nec Steph.*) *Class. B.* ii. p. 368 (1838)..	N. ferina.
Aethyia, *Agass. Nomencl. Zool. Ind. Univ.* p. 42 (1846).	
Marila, *Rchnb. Av. Syst. Nat.* p. viii (1852)	N. ferina.
Aithyia, *Bp. Compt. Rend.* xliii. p. 651, gen. 50 (1856).	
Aristonetta, *Baird, B. N. Am.* p. 793 (1858).....	N. vallisneria.
Ilyonetta, *Heine, Nomencl. Mus. Hein. Orn.* p. 347 (1890) (=Nyroca, *Flem.*).	

Range. Cosmopolitan.

Key to the Species.

a. General plumage grey; head and neck rufous-chestnut in adult males (*Aethyia*).

a'. Bill moderate, much shorter than middle toe.

a''. Head and neck chestnut-rufous, without distinct purple gloss; lower parts finely vermiculated with ashy; upper mandible (in life) blue only between nostrils and end, the basal portion being dusky ..... *ferina*, p. 335.

b''. Head and upper half of neck rich chestnut-rufous, glossed with purple; abdomen white, not vermiculated with dusky; bill pale blue, only the end black ..... *americana*, p. 340.

b'. Bill very long, equal to middle toe; upper part of the head dusky; abdomen white.... *vallisneria*, p. 342.

b. General plumage brown; head, except in *N. baeri*, wholly or partly tinged with chestnut, especially in adult males (*Nyroca*).
c'. Lower breast and upper part of the abdomen white.
c''. Head and upper part of neck black, glossed with green; a chestnut patch on the anterior part of the cheeks near the base of the bill in the female ..... *baeri*, p. 344.
d''. Head chestnut, more or less bright.
*d*³. A white spot on the chin ..... *africana*, p. 345.
*e*³. No white spot on the chin.
*e*⁴. Breast of a brighter and deeper chestnut; smaller, wing 7·8 inches ..... *innotata*, p. 350.
*f*⁴. Breast of a duller chestnut; larger, wing 8·75 inches ..... *australis*, p. 350.
d'. Abdomen dusky; upper part of the head black; sides of the head and of the upper portion of the neck deep chestnut-brown; sides reddish brown ..... *brunnea*, p. 351. *nationi*, p. 353. *erythrophthalma*, [p. 353.

1. Nyroca ferina.

Penelope, *Briss. Orn.* vi. p. 384, pl. xxxv. f. 1 (♂) (1760).
Penelope nigra, *Briss. op. cit.* p. 389 (1760).
Anas ferina, *Linn. S. N.* i. p. 203, n. 31 (1766); *Gm. S. N.* i. 2, p. 530, n. 31 (1788); *Lath. Ind. Orn.* ii. p. 862, n. 77 (1790); *Bonn. Enc. Méth.* i. p. 137, n. 32, pl. 38. f. 2 (with var. *a*, p. 137) (1790); *Lath. Tr. Linn. Soc.* iv. p. 116, tab. xiv. ff. 5, 6 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 250 (1811); *Temm. Man. d'Orn.* p. 564 (1815); *Vieill. N. D.* v. p. 125 (1816); *Dum. Dict. Sc. Nat.* vi. p. 373 (1817); *Temm. Man.* 2nd ed. ii. p. 868 (1820); *Licht. Verz. Doubl.* p. 85 (Siberia and Cyprus) (1823); *Bp. Specch. Comp.* p. 73, n. 232 (1827); *Ménétr. Cat. Rais. Cauc.* p. 58 (Bakou) (1832); *Schleg. Rev. Crit.* p. cxx (1844); *Naum. Vög. Deutschl.* xiii. p. 21, Taf. 308 (1844); *Brehm, J. f. O.* 1854, p. 84 (Egypt); *Jäckel, ibid.* p. 363 (Bavaria, breeding); *Pässler, ibid.* p. 380 (Taurie); *id. J. f. O.* 1856, p. 68; *Müll. ibid.* p. 232 (Provence); *Buvry, J. f. O.* 1857, p. 123 (Algeria); *Heugl. J. f. O.* 1862, p. 307 (N.E. Afr.); *Homey. J. f. O.* 1870, p. 433 (Baikal); *Gieb. Thes. Orn.* i. p. 350 (syn. emend.) (1872); *Rowl. Orn. Misc.* iii. p. 230 (1878).
Anas ferina β, *Gm. S. N.* i. 2, p. 530 (1788); *Lath. Ind. Orn.* ii. p. 863 (1790).
Anas ruficollis, *Scop. Ann.* I. *Hist. Nat.* p. 66, n. 81 (1769); *Bonn. Enc. Méth.* i. p. 132 (1790).
Anas erythrocephala, *S. G. Gmel. Reise Russl.* i. p. 71 (1770); *id. Nov. Comm. Petrop.* xv. p. 465, n. 14, tab. 20 (1771).
Anas penelope, *Gerini, Stor. Ucc.* v. tav. 583 (♂), 584 (♀) (1776).
Millouin, *D'Aubent. Pl. Enl.* 803; *Buff. Hist. Nat. Ois.* ix. p. 216 (1783).
Pochard, *Penn. Brit. Zool.* ii. p. 600, n. 284 (1776); *Lath. Syn.* iii. 2, p. 523, n. 68 (1785).
Rufous-necked Duck, *Lath. Syn.* iii. 2, p. 477, n. 32 (1785).

Anas rufa, *Gm. Syst. Nat.* i. 2, p. 515, n. 71 (1788) (*ex Scopoli*); *Lath. Ind. Orn.* ii. p. 863, n. 78 (1790); *Less. Tr. d'Orn.* p. 631 (syn. emend.) (1831).

Nyroca ferina, *Flem. Phil. of Zool.* ii. p. 260 (1822); *id. Brit. An.* p. 121 (1828); *G. R. Gr. List Gen. B.* p. 75 (1840); *id. Gen. B.* iii. p. 621, n. 1 (1844); *id. List B. Brit. Mus.* iii. p. 143 (part.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 75. ff. 124–26 (1845); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Homey. J. f. O.* 1859, p. 370 (Zool. Gard.); *More, Ibis*, 1865, p. 445 (Great Brit.); *Gould, B. Gr. Brit.* v. pl. 21 (pt. xxi., 1872).

Aythya ferina, *Boie, Isis*, 1822, p. 564; *Brehm, Isis*, 1830, p. 999; *id. Vög. Deutschl.* p. 920 (1831); *Bp. Comp. List*, p. 58 (1838); *id. Cat. Met.* p. 73 (1842); *Brehm, J. f. O.* 1855, p. 369 (Egypt); *Bp. Compt. Rend.* xliii. p. 651, n. 142 (excl. var.) (1856); *Loche, Cat. M. et O. Algér.* p. 144 (1858); *Jerd. B. of Ind.* iii. p. 812 (1864); *Salvad. Cat. Ucc. Sard.* p. 109 (1864); *id. J. f. O.* 1865, p. 325 (Sardinia); *G. R. Gr. Hand-list*, iii. p. 86, n. 10689 (1871); *Swinh. P. Z. S.* 1871, p. 419 (Shanghai); *Fritsch, J. f. O.* 1872, p. 371 (Bohemia); *Lloyd, Ibis*, 1873, p. 420 (Kattiawar); *Dyb. J. f. O.* 1873, p. 110; *Hevgl. Orn. N.O.-Afr.* ii. 2, p. 1341 (1873); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 46 (1877); *David & Oust. Ois. Chin.* p. 506 (1877); *Prjev. Rowley's Orn. Misc.* iii. p. 106 (1878); *Radde, Ornis Caucas.* p. 460 (1884); ? *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887).

Fuligula ferina, *Steph. Gen. Zool.* xii. 2, p. 193 (1824); *Savi, Orn. Tosc.* iii. p. 135 (1831); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Eyt. Cat. Brit. B.* p. 57 (1836); *Sw. Class. B.* ii. p. 368 (1837); *Gould, B. Eur.* v. pl. 367 (1837); *Eyt. Mon. Anat.* p. 154, pl. 12. f. 3 (cæca) (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvii, 230, (1840); *Jerd. Madr. Journ.* xii. p. 221, n. 389 (1840); *Blyth, P. Z. S.* 1842, p. 94 (India); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Blyth, Cat. B. Mus. A. S. B.* p. 306, n. 1785 (1849); *Lilljeb. Naumannia*, 1852, 2, p. 110 (N. Russia); *Wallengr. Naumannia*, 1854, p. 273; *Jäckel, J. f. O.* 1855, p. 407; *Wied, J. f. O.* 1859, p. 175; *Tristr. Ibis*, 1860, pp. 81, 163 (N. Africa); *Powys, ibid.* p. 354 (Ionian I.); *Simps. ibid.* p. 394 (W. Greece); *Tristr. P. Z. S.* 1864, p. 454 (Palestine); *Nordm. J. f. O.* 1864, p. 379 (Finland); *Schleg. Mus. P.-B.*, Anseres, p. 23 (1866) (Europe and Japan); *Baird, J. f. O.* 1866, p. 341 (Iceland); *Droste, ibid.* p. 391 (Borkum) (excl. specim. Amer.); *Tayl. Ibis*, 1867, p. 71 (Egypt); *Degl. & Gerbe, Orn. Eur.* ii. p. 538 (1867); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Eyt. Syn. Anat.* p. 112 (1869); *Droste, Vogelw. Borkum*, p. 294 (1869); *Elwes & Buckl. Ibis*, 1870, p. 340 (Turkey); *Shell. Ibis*, 1871, p. 316 (Egypt); *Saund. ibid.* p. 397 (Spain); *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 455 (1871); *Meves, Œfv. K.-Vet. Ak. Förh.* 1871, p. 782; *Tayl. Ibis*, 1872, p. 233 (Crimea); *Shell. B. of Egypt*, p. 289 (1872); *Homey. J. f. O.* 1872, p. 339 (breeding in N. Germ.); *Severtz. Turk. Jevotn.* p. 70 (1873); *Blanf. East. Pers.* ii. p. 302 (1876); *Dress. Ibis*, 1876, p. 420 (Turkestan); *Palmén, J. f. O.* 1876, p. 60 (Finland); *Blakist. & Pryer, Ibis*, 1878, p. 214; *Dress. B. Eur.* vi. p. 551, pl. 434 (1878); *Hume, Str. Feath.* viii. p. 115, n. 968 (1879); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 263 (W. Siberia); *Sclat. P. Z. S.* 1880, p. 525; *Brandt, J. f. O.* 1880, p. 250; *Hume & Marsh. Game B. of Ind.* iii. p. 248, pl. 33 (1880); *Legge, B. Ceyl.* p. 1090 (note) (1880); *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 46 (1882); *Salv. Cat. B. Strickl.*

Coll. p. 537 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 99 (Japan) (1882); *B. O. U. List Brit. B.* p. 130 (1883); *Sclat. List Vert. An.* 8th ed. p. 440 (1883); *Blakist. Amend. List B. Jap.* p. 34 (1884); *Seeb. Ibis*, 1884, p. 176 (Hakodadi); *Tristr. Faun. & Flor. Palest.* p. 117 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 413 (1884–85), *and Man. Brit. B.* p. 429; *A. Newt. Enc. Brit.* 9th ed. xix. p. 252 (1885); *Seeb. Hist. Brit. B.* iii. p. 575, pl. 64 (egg) (1885); *Meade-Waldo, Ibis*, 1889, p. 515 (Canaries); *Tristr. Cat. Coll. B.* p. 48 (1889); *Rchnw. J. f. O.* 1890, p. 84; *Lilford, Col. Fig. Brit. B.* pt. xiii. pl. — (1890); *Seeb. B. Jap. Emp.* p. 254 (1890); *Sharpe, Sec. York. Miss., Aves*, p. 132 (1891); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Styan, Ibis*, 1891, pp. 328, 497; *Dubois, Faun. Vert. Belg., Ois.* ii. p. 472, pl. 262 (1892); *Meade-Waldo, Ibis*, 1893, p. 199 (Canaries); *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881-92, p. 215 (1894).

Platypus ferinus, *C. L. Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 828 (1824).

Aithya ferina, *Kaup, Natürl. Syst.* p. 99 (1829).

Aythya erythrocephala, *Brehm, Isis*, 1830, p. 999; *id. Vög. Deutschl.* p. 919 (1831); *id. Vogelf.* p. 379 (1855).

Anas marila, *Malh. (nec Linn.) Faun. Orn. Sicil.* p. 220 (1843).

Fuligula rufa, *G. R. Gr. Gen. B.* iii. p. 621, n. 7 (1844).

Marila ferina, *Rchnb. Av. Syst. Nat.* p. viii (1852).

Aithyia ferina, *Licht. Nomencl. Av.* p. 102 (1854).

Aythya ruficeps, *Brehm, Naumannia*, 1855, p. 298.

Fuligula erythrocephala, *C. F. Dubois, Pl. Col. Ois. Belg.* iii. p. 278 (1860).

Anas (Fuligula) ferina, *Radde, Reis. S. O.-Sibir.* ii. p. 375 (1863) (Baikal).

Aethyia ferina, *Gigl. Ibis*, 1865, p. 52 (Pisa); *Swinh. Ibis*, 1874, p. 182 (Taihoo Lake); *B., Bl., R., & S. J. f. O.* 1877, p. 337 (Germany); *Salvad. El. Ucc. Ital.* p. 265 (1886); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 306 (1891).

Fulix ferina, *Salvad. Faun. d'Ital., Ucc.* p. 265 (1872); *Regalia, Proc.-Verb. Soc. Tosc. Sc. Nat.* 1888, p. 92 (nail on the digits).

Hybrids.

Fuligula mariloides, *Yarrell (nec Vig.), Hist. Brit. B.* iii. p. 247, with fig. (1837–43); *Bp. Rer. Crit.* pp. 106, 195 (part.) (1850).

American Scaup, *Yarrell (nec auct.), l. c.*; *Saund. in Yarrell's Hist. Brit. B.* iv. p. 427, fig. p. 428 (1884–85).

Aythya mariloides, part., *Bp. Cat. Met. Ucc. Eur.* p. 72, n. 453 (1842); *id. Rev. Crit.* p. 195, n. 443 (part.) (1850).

Fuligula ferinoides, *Bartl. P. Z. S.* 1847, p. 48; *Gould, P. Z. S.* 1854, p. 95; *A. Newt. P. Z. S.* 1860, pp. 337, 338.

Fuligula leucoptera, *A. Newt. Zoologist*, 1848, p. 2063 (=ferinoides).

Fuligula homeyeri, *Bädeker, Naumannia*, 1852, Heft i. p. 12 (Rotterdam); *Baldam. ibid.* Heft ii. p. 124, Taf. 1; *Naum. J. f. O.* 1853, Extrah. p. 7 (hybrid); *Fritsch, J. f. O.* 1854, p. 280; *Gloger, J. f. O.* 1854, p. 408 (not a hybrid !); *Bädek. J. f. O.* 1854, Extrah. p. xiv; *Homeyer, ibid.* p. lxvi; *Olphe-Gall. Naumannia*, 1855, pp. 402, 403; *Gloger, op. cit.* 1856, p. 252; *id. J. f. O.* 1856, pp. 272, 354; *Olphe-Gall. Naumannia*, 1857, p. 6; *Blas. in Naum. Deutsch. Vög.* xiii. 2, p. 305, Taf. 389. f. 2 (1860); *A. Newt. P. Z. S.* 1860, pp. 337, 338; *Rey, Syn. Eur. Brutvög. u.*

Gäste, p. 130 (1872); *Arrig. degli Oddi, Atti Soc. Ital. Sc. Nat.* xxxiv. fasc. 2, pp. 179–192 (1894).

Anas intermedia, *Jaubert, Rev. et Mag. de Zool.* 1852, p. 118 (= Anas ferina × A. nyroca); *A. Newt. P. Z. S.* 1860, p. 337.

Aythya homeyeri, *Brehm, Vogelf.* p. 380 (1855); *id. Naumannia*, 1855, p. 298.

Aythyia ferina *a.* homeyeri, *Bp. Compt. Rend.* xliii. p. 651, n. 142 *a* (1856).

Aythyia ferina *b.* intermedia, *Bp. l. c.* n. 142 *b* (1856).

Aythyia ferina *c.* ferinoides, *Bp. l. c.* n. 142 *c* (1856).

Anas homeyeri, *Homey. J. f. O.* 1870, p. 433.

Fuligula ferina × Æx sponsa, *Sclat. List Vert. An.* 8th ed. p. 440 (1883); *Leverk. J. f. O.* 1890, p. 224.

Fuligula ferina ♂ × F. cristata ♀, *Saund. P. Z. S.* 1886, p. 550.

Fuligula ferina × F. nyroca, *Leverk. J. f. O.* 1890, p. 223; *Albarda, J. f. O.* 1892, p. 429.

Fuligula ferina × F. cristata, *Leverk. J. f. O.* 1890, p. 224.

Fuligula ferina × Clangula glaucion, *Leverk. ibid.*

Fuligula ferina × Anas boschas, *Leverk. ibid.*

Fuligula ferina × Anas obscura, *Leverk. ibid.*

Fuligula ferina × (Anas boschas × A. strepera), *Leverk. ibid.*

Adult male. Head and upper neck rufous chestnut; upper back, lower neck, and upper breast all round glossy black; mantle, scapulars, tertials, and upper parts lavender-white, finely vermiculated with black; rump, upper tail-coverts, and under tail-coverts dull black; lower breast almost white, scarcely vermiculated, and gradually becoming darker on the lower abdomen and merging into black on the under tail-coverts; wing-coverts grey, more or less vermiculated with white; a grey speculum on the secondaries, the inner ones edged with blackish on the outer web, all edged with white at the tip; primaries grey, darker at the tip and on the outer web; under wing-coverts and axillaries white, the marginal under wing-coverts grey; tail brown-grey: bill black at the base and tip, the intermediate space dull light blue; legs dark lead-blue, webs nearly black; irides yellow. Total length about 18 inches, wing 8·5, tail 2·6, culmen 2·2, tarsus 1·4.

Adult female. Head and neck dull reddish brown, shading into buffish white on the throat; back and scapulars greyish brown, vermiculated with blackish; rump and upper tail-coverts black, indistinctly vermiculated with greyish; upper breast pale reddish brown, the edges of the feathers whitish grey; lower breast and abdomen grey, becoming darker brown on the lower abdomen and under tail-coverts, which, like the sides and flanks, are distinctly vermiculated with blackish; wings and tail as in the male: bill duller than in the male; legs dull dark lead-grey. In size somewhat less than the male.

Young males resemble the females, but have the brown of the head and neck redder.

Males in first nuptial dress differ from the adults in having the chestnut of the head and neck paler, and the black of the breast and upper back replaced by dark brown.

Young in down, according to Naumann, are dark brown on the

upper parts, shading into rusty brown on the head and neck; underparts dirty yellowish white: bill and feet light bluish; iris grey.

Hab. Palæarctic Region from Iceland to Japan; breeding principally in the northern part of the Western Palæarctic Region; it winters in S. Europe and Northern Africa, and from Asia Minor through Persia, India, and China to Japan.

a. ♂ ad. sk.	Aberdeenshire (*W. C. Angus*).	H. J. Elwes, Esq. [P.].
b, c. ♂ ♀ ad. st.	England (London Market).	Purchased.
d. ♂ ad. sk.	Milford Hall, Stafford, Jan.	Capt. W. S. Levett [P.].
e. ♂ ad. sk.	Cambridge Market, Nov.	Salvin-Godman Coll.
f. ♀ ad. sk.	Cambridge Market, Nov.	H. J. Elwes, Esq. [P.].
g, h. ♂ ♀ ad. st.	Aldeburgh, Feb., Aug.	Theodore Fisher, Esq. [P.].
i, k, l. ♂ ad. sk. et ♂ ♀ imm. st.	Tring, Herts, June, Sept.	Hon. W. Rothschild [P.].
m, n. ♂ ad. sk.	Avington, Hants, Dec. (*G. E. S.*)	Shelley Coll.
o. ♂ ad. sk.	Cookham, Dec. (*W. Briggs*).	Tweeddale Coll.
p. ♂ imm. st.	Somersetshire.	Montagu Coll.
q. ♂ ad. sk.	Devonshire.	Montagu Coll.
r. ♂ ad. sk.	Arcachon, France, Nov. (*E. V. Seebohm*).	Seebohm Coll.
s, t. ♂ ad. et ♀ imm. sk.	El Baheira, Tunis, March (*O. S.*).	Salvin-Godman Coll.
u, v. ♂ ♀ ad. sk.	Egypt, Feb. (*G. E. S.*).	Shelley Coll.
w. ♀ imm. sk.	Cairo, May.	Dr. Worthington.
x. ♀ ad. sk.	Mesopotamia.	Euphrates Expd. [P.].
y, z. ♂ ♀ imm. sk.	Lenkoran, Jan.	Seebohm Coll.
a'. ♂ ad. sk.	Central Asia.	Moscow Museum [P.].
b', c'. ♂ ad. sk.	Kashgar (*Bellew*).	India Museum [P.].
d', e'. ♂ ♀ ad. sk.	Kandahar, March.	Lt.-Colonel Swinhoe [P.].
f', g', h'. ♂ ♀ ad. sk.	Mado Mehur, Upper Sindh, Jan. (*A. O. H.*).	Hume Coll.
i'. ♀ ad. sk.	Sehwan, Sindh, Jan. (*A. O. H.*).	Hume Coll.
k'. ♂ ad. sk.	Roree, Sindh, Feb.	India Museum [P.].
l'. ♂ ad. sk.	Rajpootana, March (*A. O. H.*).	Hume Coll.
m', n', o'. ♂ ♀ ad. sk.	Delhi, Jan.	Hume Coll.
p'–t'. ♂ ♀ ad. et ♂ imm. sk.	Gurgaon, Jan. (*A. O. H.*).	Hume Coll.
u'. ♂ juv. sk.	Etawah, Dec.	Hume Coll.
v'. ♂ ad. sk.	Sandee, March (*A. Anderson*).	Seebohm Coll.
w'. ♀ ad. sk.	Futtehgurh, Feb. (*A. Anderson*).	Seebohm Coll.
x', y'. ♀ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
z'. ♀ imm. st.	Nepal.	B. H. Hodgson, Esq. [P.].

a''. ♂ ad. sk.	Manipur, March (*A. O. H.*).	Hume Coll.
b''. ♂ ad. sk.	Shanghai, China, Dec. (*A. Michie*).	Seebohm Coll.
c''. ♂ ad. sk.	Hakodadi, Japan, March.	F. Ringer, Esq. [P.].
d'', *e''*. ♂ ♀ imm. sk.	Yokohama, Japan, winter (*H. Pryer*).	Seebohm Coll.
f''. ♂ skeleton.	England.	Purchased.
g''. Skeleton.	England.	Purchased.
h''. Sternum.	England.	G. Ingall, Esq. [P.].
i''. Sternum with shoulder-girdle.	England.	J. Ray, Esq. [P.].
k''. Sternum with shoulder-girdle.	England.	M. Lefebvre's Coll.
l'', *m''*. Sterna.		

HYBRIDS.

Nyroca ferina × *F. marila.*

n''. ♂ ad. st.	Purchased at Mr. Doubleday's sale, Aug. 23, 1871. (Type of *Fuligula mariloides*, Yarr. nec Vigors.)	F. Bond, Esq. [P.].

Nyroca ferina × *F. fuligula.*

o''. ♂ juv. st.	Woodford Park, Blackburn, Aug.	R. J. Howard, Esq. [P.].

2. Nyroca americana.

Anas ferina, *Gm. S. N.* i. 2. p. 530, n. 31 (part.) (1788); *Lath. Ind. Orn.* ii. p. 862, n. 77 (1790); *Wils.* (*nec Linn.*) *Am. Orn.* viii. p. 110, pl. 70. f. 6 (1814); *Bp. Specch. Comp.* p. 73, n. 253 (1827); *Doughty, Cab. N. H.* ii. p. 40, pl. iv. (1832); *Gieb. Thes. Orn.* i. p. 350 (part.) (1872).

Anas (Fuligula) ferina, *Bp. Obs. Nomencl. Wils.* n. 270 (1825).

Fuligula ferina, *Bp.* (*nec Linn.*) *Ann. Lyc. N. Y.* ii. p. 392 (1826); *id. Syn.* p. 392 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 452 (1831); *Nutt. Man.* ii. p. 434 (1834); *Aud. Orn. Biogr.* iv. p. 198, p. 322 (1835); *id. Syn.* p. 287 (1839); *id. B. Am.* vi. p. 311, pl. 396 (1843); *Giraud, B. Long Isl.* p. 320 (1884); *Schleg. Mus. P.-B.*, Anseres, p. 23 (part.) (1866).

Fuligula americana, *Bp.*, *fide Eyt. Mon. Anat.* pp. 155, 156 (1838); *Gosse, B. Jam.* p. 408 (1847); *Wied, J. f. O.* 1859, p. 175; *Albrecht, J. f. O.* 1862, p. 207 (Jamaica); *Turnb. B. E. Pa.* p. 46 (1869); *Eyt. Syn. Anat.* p. 113 (1869); *Sclat. & Salv. P. Z. S.* 1876, p. 400; *Sclat. P. Z. S.* 1880, p. 526; *Cory, List B. W. Ind.* p. 31 (1885); *Seeb. Hist. Brit. B.* iii. p. 576 (1885); *Tristr. Cat. Coll. B.* p. 48 (1889).

Aythya erythrocephala, *Bp.* (*nec Brehm*), *Comp. List*, p. 51, n. 387 (1838); *Newb. P. R. R. Rep.* vi. 4, p. 103 (1857).

Nyroca americana, *G. R. Gr. Gen. B.* iii. p. 621, n. 2 (1844); *id. List Spec. B. Brit. Mus.* p. 143 (1844); *A. & E. Newt. Handb. Jam.* p. 113 (1881).

Nyroca ferina americana, *Rchnb. Syn. Av.*, Natatores, t. 77. f. 889 (1845) (*ex Audubon*).

Nyroca ferina, *Woodh. Sitgr. Rep.* p. 104 (1853).

Aythya ferina, *d.* americana, *Bp. Compt. Rend.* xliii. p. 651, n. 142 *d* (1856).

Aythya americana, *Baird, B. N. Am.* p. 793 (1858); *id. Cat. N. Am. B.* n. 618 (1859); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *id. J. f. O.* 1861, p. 56; *March, Pr. Ac. Philad.* 1864, p. 27 (Jamaica); *G. R. Gr. Hand-list*, iii. p. 86, n. 10690 (1871); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mazatlan) (1874); *A. O. U. Check-list N. Am. B.* p. 118, n. 146 (1876); *Ridgw. Man. N. Am. B.* p. 101 (1887); *Cory, Auk*, 1888, p. 66; *id. B. W. Ind.* p. 267 (1889); *Hatch, B. of Minnes.* p. 55 (1892).

Nyroca erythrocephala, *Heerm.* (*nec Brehm*) *P. R. R. Rep.* x. pt. 4, p. 70 (1859).

Aethyia americana, *Dress. Ibis*, 1866, p. 43 (Texas); *Brown, Ibis*, 1868, p. 426 (Vancouver I.); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Ridgw. Nomencl. N. Am. B.* n. 618 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 36 (1884); *Nehrl. J. f. O.* 1885, p. 147 (Illinois).

Aythya ferina, var. americana, *Allen, Bull. Mus. C. Z.* iii. p. 183 (1872).

Fuligula ferina, var. americana, *Coues, Key*, p. 289 (1872); *id. Check-list N. Am. B.* n. 503 (1873); *id. Birds N.-West*, p. 575 (1874); *Cory, B. Bahama I.* p. 189 (1880); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 473 (1892).

Fuligula ferina americana, *Coues, Check-list N. Am. B.* 2nd ed. p. 114, n. 723 (1882).

Fulix ferina americana, *Coues, Key N. Am. B.* 2nd ed. p. 702, n. 723 (1884).

Hybrid.

Fuligula americana × F. marila (!), *Leverk. J. f. O.* 1890, p. 224.

Very similar to *N. ferina*, but the rich chestnut colour of the head and upper half of neck glossed with purple; abdomen white, not vermiculated with dusky: bill pale blue, only the end black. Size the same as that of *N. ferina*, or very little larger; wing 9·4 inches, culmen 2.

Female. Head and neck greyish brown, darker above, the fore part of the former lighter, almost white on chin and upper throat; back, scapulars, chest, sides, and flanks dull greyish brown, the feathers tipped with paler or fulvous; abdomen whiter than in *N. ferina* female.

Young in down. "Above ochraceous olive-brown, with an indistinct yellowish spot behind each wing, another on the lower border of the arm-wing, and a third on each side of the rump; whole sides of head and neck, with lower parts in general, deep buff-yellow, paler and duller on belly and ventral region; no dark markings on sides of head" (*Ridgway*).

Hab. Whole of North America, breeding from Maine and California northward.

a, b. ♂ ♀ ad. st.	No locality.	Mr. Hadcraft [C.].
c. ♂ ad. sk.	[England.]	Tweeddale Coll.
d. ♂ ad. sk.	Vancouver's Island (*Higgins*).	Salvin-Godman Coll.
e, f. ♂ ♀ ad. sk.	49th Parallel.	N. America Boundary Commission [P.].
g. ♀ ad. sk.	Fort Dufferin.	N. America Boundary Commission [P.].

h. ♂ juv. sk.	Warner Lake, Oregon, Sept.	Salvin-Godman Coll.
i. ♂ ad. sk.	Chicago, Illinois (*Nelson & Jencks*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Neuces Co., Texas, Jan. (*N. E. Noakes*).	Salvin-Godman Coll.
l–s. ♂ ♀ ad. et ♂ juv. sk.	Corpus Christi, Texas, March, Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
t. ♂ imm. sk.	Brownsville, Texas, April (*F. B. Armstrong*).	Salvin-Godman Coll.
u. ♂ ad. sk.	Zacatecas, Mexico, April (*W. B. Richardson*).	Salvin-Godman Coll.
v. ♂ ad. sk.	Valley of Mexico (*H. S. le Strange*).	Salvin-Godman Coll.

3. Nyroca vallisneria.

The Canvas-back Duck.

Anas vallisneria, *Wils. Am. Orn.* viii. p. 108, pl. 70. f. 5 (1814); *Less. Tr. d'Orn.* p. 631 (1831); *Doughty, Cab. N. H.* ii. p. 36, pl. 4 (1832); *Cory, List B. W. Ind.* p. 30 (1885).

Anas vallisneriana, *Sabine, App. Frankl. Journ.* p. 699 (1823).

Anas valisneria, *Vieill. Enc. Méth.* i. p. 359 (1823).

Fuligula vallisneria, *Steph. Gen. Zool.* xii. 2, p. 196 (1824); *Bp. Ann. Lyc. N. Y.* ii. p. 392 (1826); *id. Syn.* p. 392 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 451 (1831); *Nutt. Man.* ii. p. 430 (1834); *Eyt. Mon. Anat.* p. 153 (1838); *Aud. Orn. Biogr.* iv. p. 1, pl. 301 (1838); *id. Syn.* p. 285 (1839); *id. B. Am.* vi. p. 299, pl. 395 (1843); *Gir. B. Long Isl.* p. 318 (1844); *DeKay, N. Y. Zool.* ii. p. 321 (1844); *Turnb. B. E. Pa.* 1869, p. 46; *Coues, Key*, p. 290 (1872); *id. Check-list*, n. 504 (1873); *id. Birds N.-West*, p. 575 (1874); *id. Check-list*, 2nd ed. p. 115, n. 724 (1882); *Hartert, Kat. Vogelsamml.* p. 232 (1891).

Aythya valisneria, *Boie, Isis*, 1826, p. 980; *Bp. Comp. List*, p. 58 (1838); *id. Compt. Rend.* xxxviii. p. 664 (1854); *id. Not. Coll. Delattre*, p. 94 (1854); *id. Compt. Rend.* xliii. p. 651, n. 143 (1856); *Newb. P. R. R. Rep.* vi. p. 103 (1857); *Baird, B. N. Am.* p. 794 (1858); *id. Cat. N. Am. B.* n. 592 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 258 (1860); *Blakist. Ibis*, 1862, p. 10 (Brit. N. Am.); *Kirkby, Ibis*, 1862, p. 308; *Ross, Canad. Nat.* Apr. 1862; *Blakist. Ibis*, 1863, p. 148; *March, Pr. Ac. Philad.* 1864, p. 72 (Jamaica); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 390 (1866); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (Alaska) (1869); *G. R. Gr. Hand-list*, iii. p. 86, n. 10691 (1871); *Aiken, Pr. Bost. Soc.* xv. p. 210 (1872); *Snow, B. Kans.* p. 11 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mexico) (1874); *Gundl. J. f. O.* 1875, p. 382 (Cuba); *A. O. U. Check-list N. Am. B.* p. 118, n. 147 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 71 (1887); *Cory, Auk*, 1888, p. 66 (Cuba, Jamaica); *Hatch, B. of Minnes.* p. 57 (1892).

Fuligula valisneria, *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Rchnb. Syn. Av.*, Natatores, t. 80. ff. 2758–60 (1850) (*ex Audubon*); *Wied, J. f. O.* 1859, p. 174; *Sclat. & Salv. P. Z. S.* 1876, p. 400; *Sclat. P. Z. S.* 1880, p. 526.

Nyroca valisneria, *G. R. Gr. List B. Brit. Mus.* iii. p. 43 (1844); *id. Gen. B.* iii. p. 621, n. 3 (1844); *Woodh. Sityr. Rep.* p. 104 (1853);

Heerm. P. R. R. Rep. x. pt. iv. p. 70 (1859); *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *A. & E. Newt. Handb. Jam.* p. 113 (1881).

Nyroca valisneri, *Rchnb. Syn. Av.*, Natatores, t. 75. f. 127 (1845).

Aythyia erythrocephala, *Licht.* (*nec Brehm*) *Nomencl. Av.* p. 102 (N. America, Mexico) (1854).

Aythya valisneri, *Brehm, Naumannia*, 1855, p. 298; *id. Vogelf.* p. 380 (1855).

Aethyia valisneria, *Cab. & Gundl. J. f. O.* 1857, p. 229 (Cuba); *Gundl. J. f. O.* 1861, p. 246; *Salv. Ibis*, 1866, p. 198 (Guatemala); *Brown, Ibis*, 1868, p. 426 (Vancouver I.); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Ridgw. Nom. N. Am. B.* n. 617 (1881).

Aristonetta vallisneria, *Baird, B. N. Am.* p. 793 (in text) (1858).

Aethyia vallisneria, *Dress. Ibis*, 1866, p. 43 (Texas); *B., B., & R. Water-B. N. Am.* ii. p. 30 (1884); *Nehrl. J. f. O.* 1885, p. 147 (Illinois).

Fuligula valisneriana, *Schleg. Mus. P.-B.*, Anseres, p. 25 (1866); *Tristr. Cat. Coll. B.* p. 48 (1889).

Anas valisneriana, *Gieb. Thes. Orn.* i. p. 364 (1872).

Fulix vallisneria, *Coues, Key N. Am. B.* 2nd ed. p. 703 (1884).

Adult male. Similar to that of *N. ferina*, but much larger and with a much longer bill; the upper part of the head darker chestnut than the rest; lower breast and abdomen white: "bill entirely greenish black; iris carmine-red; feet bluish grey" (*Coues*). Total length 20 to 22 inches, wing 9·25, tail 2·9, culmen 2·6, tarsus 1·6.

Adult female. Head, neck, jugulum, and anterior part of back raw-umber-brown, a postnuchal space, the fore part of the head, and fore neck whitish; chin, throat, and cheeks tinged with fulvous; back, scapulars, and flanks greyish brown, vermiculated with white; wings as in the male: "bill greenish black; iris brownish red; feet plumbeous" (*B., B., & R.*).

Hab. North America, breeding from the North-western States, northward to Alaska; in winter southwards to Guatemala and W. Indies.

a, b. ♂ ♀ ad. st.	N. America.	Old Coll.
c. ♂ ad. sk.	Fort Rupert, Vancouver's Island (*J. K. Lord*).	N. America Boundary Commission [P.].
d, e, f. ♂ ad. sk.	Vancouver's Island (*J. K. Lord*).	N. America Boundary Commission [P.].
g, h. ♂ ♀ ad. sk.	Minnesota.	H. Courage, Esq. [P.].
i. ♂ juv. sk.	49th Parallel.	N. America Boundary Commission [P.].
k. ♂ ad. sk.	Cook Co., Illinois (*E. W. Nelson*).	Salvin-Godman Coll.
l–o. ♂ ♀ imm. sk.	Corpus Christi, Texas, Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
p–v. ♂ ♀ ad. sk.	Brownsville, Texas, March, April (*F. B. Armstrong*).	Salvin-Godman Coll.
w. ♂ imm. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
x. Skeleton.	N. America.	Eyton Coll.

4. Nyroca baeri.

Anas leucophthalmos, *Kittl.* (*nec Borkh.*) *Isis*, 1829, p. 529 (Kamtschatka); *cf. Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (note) (1887).

? Nyroca leucophthalma *a.* dussumieri, *Bp. Compt. Rend.* xliii. p. 651, n. 138 *a* (Bengal, valde major) (1856)*.

Anas (Fuligula) baeri, *Radde, Reis. S. O.-Sibir.* ii. p. 376, pl. 15 (1863); *cf. Ibis*, 1866, p. 118.

Anas baeri, *Homey. J. f. O.* 1870, p. 433.

Aythya ferina (*errore*), *Swinh. P. Z. S.* 1871, p. 419 (Shanghai); *id. Ibis*, 1873, p. 366.

Fulix baeri, *Swinh. P. Z. S.* 1871, p. 419 (Kiukiang on the Yangtse); *id. Ibis*, 1873, pp. 366, 367, ? 1875, p. 457.

Fulix cristata, part., *G. R. Gr. Hand-list*, iii. p. 86, n. 10684 (1871).

Fuligula nyroca, *David* (*nec Güldenst.*), *N. Arch. du Mus., Bull.* vii. *Cat.* n. 354 (1871); *Blakist. & Pryer, Ibis*, 1878, p. 215 (Japan); *Seeb. Ibis*, 1879, p. 22 (Japan).

Fuligula baeri, *Dyb. J. f. O.* 1874, p. 337; *Taez. J. f. O.* 1875, p. 257 (Ussuri); *id. Bull. Soc. Zool. Fr.* ii. p. 47 (1877); *David & Oust. Ois. Chine*, p. 509, pl. 124 (1877); *Seeb. B. Jap. Emp.* p. 254 (1890); *Styan, Ibis*, 1891, pp. 328, 497 (Yangtse).

Fulix nyroca, *David & Oust.* (*nec Güldenst.*) *Ois. Chine*, p. 507 (1877)†.

Nyroca ferruginea, *Blakist. & Pryer* (*nec Gm.*), *Tr. As. Soc. Jap.* x. 1, p. 99 (1882); *Blakist. Amend. List B. Jap.* p. 9, n. 47 (1884).

Fuligula baeri (*errore*), *Tristr. Cat. Coll. E.* p. 48 (1889).

Adult male. Head and neck black, with a green lustre; a white spot on chin; upper parts brown; the interscapular region and the scapulars finely waved with paler brown irregular lines; breast rufous chestnut, sharply defined from the white of the abdomen; under tail-coverts white; flanks rufous brown; vent tinged with brown; speculum white, with a broad blackish subapical band; a narrow white band at the tip of the secondaries; quills whitish, with the outer web and tips brown; marginal under wing-coverts blackish, remainder, like the axillaries, white; tail brown: bill bluish, with the base and the nail black; feet lead-grey, with the joints darker; irides white or "pale yellow" (*David*). Total length about 19 inches, wing 8, tail 2·8, culmen 1·75, tarsus 1·45.

Female. Similar to the male, but the head and neck less glossy, a chestnut patch on the anterior part of the face, near the base of the bill; upper breast of a duller chestnut; back brown, without narrow wavy lines; brown base of the abdominal feathers more extended.

Hab. Eastern Asia, from Kamtschatka to Shanghai, and Japan.

a. ♂ ad. sk.	No locality.	Seebohm Coll.
b. ♂ ad. sk.	Kiukiang, China, March (*R. Swinhoe*).	Seebohm Coll.

* In the Paris Museum there is a specimen of *N. baeri* labelled "Bengala, 1825 (*Duvaucel*)"!

† In the Paris Museum there are no specimens of *N. africana* collected in China by Père David.

c–g. ♂ ♀ ad. sk.	Shanghai, China, March (*R. Swinhoe*).	Seebohm Coll.
h. ♂ ad. sk.	Shanghai, China, March.	Dr. R. Bowdler Sharpe [P.].
i. ♀ ad. sk.	Shanghai, China, March.	Shanghai Museum [P.].
k, l, m. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.

5. Nyroca africana.

The Ferruginous Duck.

Anas (rufa), *Linn. Faun. Suec.* n. 134 (1746).

? Anas latirostra, *Brünn. Orn. Bor.* p. 21, n. 91 (1764).

Anas nyroca, *Güldenst. Nov. Comm. Petrop.* xiv. 1, p. 403 (1769); *Lath. Syn.* iii. 2, p. 541, n. 79, var. A (1785); *id. Ind. Orn.* ii. p. 869, n. 91 (1790); *Bonn. Enc. Méth.* i. p. 135 (1790); *Bechst. Latham's Uebers.* iii. p. 465, n. 29 (1796); *Vieill. N. D.* v. p. 131 (1816); *Less. Tr. d'Orn.* p. 632 (1831); *Schleg. Rev. Crit.* p. cxx (1844); *Naum. Vög. Deutschl.* xii. p. 41, t. 309 (1844); *Fritsch, J. f. O.* 1853, Extrah. p. 33 (Croatia); *Jäckel, J. f. O.* 1854, p. 363 (Bavaria); *Püssler, ibid.* p. 380 (Tauris); *Tangerow, J. f. O.* 1855, p. 345; *Bolle, J. f. O.* 1857, p. 266 (Canaries); *Fritsch, J. f. O.* 1858, p. 413; *Tristr. Ibis*, 1859, p. 161 (eggs); *Finsch, J. f. O.* 1859, p. 387 (Bulgaria); *Baldam. J. f. O.* 1870, pp. 280, 281 (Mansfelder Lake); *Gieb. Thes. Orn.* i. p. 358 (1872); *Finsch, Ibis*, 1877, p. 54.

? Anas peregrina, *S. Gmel. Reis. Russl.* ii. p. 183, t. 16 (1774); *Gieb. Thes. Orn.* i. p. 359 (1872).

? Anas skoorra, *Müll. Zool. Dan. Prodr.* p. 16, n. 130 (1776); *Lath. Syn.* iii. 2, p. 515, n. 60 (1785); *Bonn. Enc. Méth.* i. p. 134 (1790).

Anas glaucia major, *Gerini, Stor. degli Ucc.* v. t. 589 (♂), 590 (♀) (1776).

Ferruginous Duck, *Penn. Brit. Zool.* n. 285, t. 99 (1776); *Lath. Syn.* iii. 2, p. 526, n. 71 (1785).

Sarcelle d'Egypte, *D'Aubent. Pl. Enl.* 1000; *Buff. Hist. Nat. Ois.* ix. p. 273 (1783).

Red Duck, *Penn. Arct. Zool.* ii. p. 576 (1785).

? Lapmark Duck, *Penn. Arct. Zool.* ii. p. 576, M (1785); *Lath. Syn.* iii. 2, p. 515, n. 60 (1785) (=latirostra, *Brünn.*=skoorra, *Müll.*).

Tufted Duck, var. A, *Lath. Syn.* iii. 2, p. 541, n. 79 (1785).

Anas rutila, *Lath.* (*nec Pall.*) *Syn.* iii. 2, p. 526, n. 71 (1785); *id. Syn. Suppl.* i. p. 297 (1787).

African Teal, *Lath. Syn.* iii. 2, p. 555, n. 93 (1785).

? Anas scandiaca, *Gm. S. N.* i. 2, p. 520, n. 85 (1788); *Lath. Ind. Orn.* ii. p. 859, n. 68 (1790); *Vieill. N. D.* v. p. 155 (1816); *Dum. Dict. Sc. Nat.* vi. p. 376 (1817).

Anas africana, *Gm. S. N.* i. 2, p. 522, n. 88 (1788) (*ex Pl. Enl.* 1000); *Lath. Ind. Orn.* ii. p. 875, n. 104 (1790); *id. Tr. Linn. Soc.* xi. p. 178 (1815); *Vieill. N. D.* v. pp. 131, 171 (1816); *Dum. Dict. Sc. Nat.* vi. p. 394 (1817).

Anas ferruginea, *Gm. S. N.* i. 2, p. 528, n. 99 (1788) (*ex Pennant*); *Lath. Ind. Orn.* ii. p. 866, n. 84 (1790); *Bonn. Enc. Méth.* i. p. 126 (1790); *Retz. Faun. Suec.* p. 130 (1800); *Vieill. N. D.* v. p. 116 (1816); *Dum. Dict. Sc. Nat.* vi. p. 376 (1817).

Anas nyraca (*errore*), *Gm. S. N.* i. 2, p. 542, n. 119 (1788) (*ex Güldenstädt*); *Licht. Verz. Doubl.* p. 85 (1823).

? Anas gattair, *Gm. S. N.* i. 2, p. 542, n. 122 (1788) (*ex Forsk. Descr. An.* p. 3, n. 10, 1775); *Lath. Ind. Orn.* ii. p. 877, n. 115 (1790); *Bonn. Enc. Méth.* i. p. 134 (1790); *Vieill. N. D.* v. p. 118 (1816).

Anas ægyptiaca, *Bonn.* (*nec Linn.*) *Enc. Méth.* i. p. 159 (1791) (*ex Buffon*).

Anas ferina, var. 1, *Bechst. Nat. Gesch. Deutschl.* ii. p. 658 (1791).

Anas leucophthalmus, *Borkhausen, Deutsche Fauna*, i. p. 564, n. 204 (1797); *Bechst. Orn. Taschenb.* ii. p. 450, n. 33 (1803); *id. Naturg. Deutschl.* iv. p. 1009 (1809); *Temm. Man. d'Orn.* p. 571 (1815); *id. op. cit.* 2nd ed. ii. p. 876 (1820); *Faber, Prodr. Isl. Orn.* p. 72 (1822); *Ranz. Elem. di Zool.* iii. 9. p. 133 (1826); *Lotz. Isis*, 1828, p. 1233; *Temm. Man.* iv. p. 546 (1840); *Bolle, J. f. O.* 1855, p. 179 (Canaries); *Müll. J. f. O.* 1856, p. 232 (Provence); *Finsch, Ibis*, 1877, p. 50.

Anas leucopis, *Naum. Naturg. d. Land- u. Wasserv.* iii. p. 479, t. lix. f. 89 (♂) (1799).

Anas glaucion, *Pall.* (*nec Linn.*) *Zoogr. Rosso-As.* ii. p. 268 (1811).

Nyroca nyroca, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Licht. Nomencl. Av.* p. 102 (1854); *G. R. Gr. Hand-list*, iii. p. 86, n. 10693 (1871); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (note) (1887).

Aythya nyroca, *Boie, Isis*, 1822, p. 564; *Brehm, Isis*, 1830, p. 999; *id. Vög. Deutschl.* p. 918 (1831); *Jerd. B. of Ind.* iii. p. 813, n. 969 (1864); *Pelz. J. f. O.* 1868, p. 37 (Sirinagur); *Meves, Œfvers. K. Vet.-Ak. Förh.* 1871, p. 782; *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1343 (Korosko, Tigré) (1873); *Hume & Henders. Lahore to Yark.* p. 297 (1873); *Hume, Nests & Eggs*, p. 645 (1873); *Lloyd, Ibis*, 1873, p. 420 (Kithawar); *Scully, Str. Feath.* iv. p. 202 (Yarkand) (1876); *Radde, Ornis Caucas.* p. 461 (1884).

Fuligula nyroca, *Steph. Gen. Zool.* xii. 2, p. 201, pl. 55 (1824); *Savi, Orn. Tosc.* iii. p. 138 (1831); *Eyt. Cat. Brit. B.* p. 57 (1836); *Jerd. Madr. Journ.* xii. p. 222, n. 391 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxvii, 230 (1840); *Vigne, P. Z. S.* 1841, p. 7 (Little Thibet); *Blyth, Ibis*, 1842, p. 94 (India); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *Blyth, Cat. B. Mus. A. S. B.* p. 307, n. 1789 (1849); *Jäckel, J. f. O.* 1855, p. 407 (Bavaria); *Bolle, J. f. O.* 1857, p. 348 (Canaries); *Adams, P. Z. S.* 1858, p. 510 (Cashmere); *Tristr. Ibis*, 1860, p. 163 (N. Africa); *Powys, Ibis*, 1860, p. 354 (Ionian I.); *Simps. ibid.* pp. 391, 394 (W. Greece); *Tristr. P. Z. S.* 1864, p. 454 (Palestine); *Droste, J. f. O.* 1864, p. 428 (Borkum); *Schleg. Mus. P.-B.*, Anseres, p. 30 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 540 (1867); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Saund. Ibis*, 1869, p. 397 (Italy); *Droste, Vogelw. Borkum*, p. 295 (1869); *Ehr. & Buckl. Ibis*, 1870, p. 340; *Blyth, B. of Burma*, p. 166 (Arakan) (1875); *Palmén, J. f. O.* 1876, p. 60; *Blanf. East. Pers.* ii. p. 302 (1876); *Finsch, Ibis*, 1877, p. 62 (young in down); *id. Verh. z.-b. Ges. Wien*, 1879, p. 151 (W. Siberia); *Hume, Str. Feath.* vii. p. 493 (1879), viii. p. 115, n. 969 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 263, pl. 35 (1880); *Sclat. P. Z. S.* 1880, p. 526; *Brandt, J. f. O.* 1880, p. 250; *Scully, Ibis*, 1881, p. 593 (Gilgit); ? *Hartl. P. Z. S.* 1881, p. 956 (Socotra!); *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *Severtz. Ibis*, 1883, p. 77 (Pamir Range); *Oates, B. of Brit. Burm.* ii. p. 287 (1883); *Saund. Yarrell's Hist. Brit. B.* iv. p. 418 (1884–85), *and Man. Brit. B.* p. 433; *Seeb. Hist. Brit. B.* iii. p. 571, pl. 64. (egg) (1885); *Menzb. Ibis*, 1885, p. 358 (Upper Tarim); *Scully, J. A. S. B.* lvi. p. 89

(1887); *Tristr. Cat. Coll. B.* p. 48 (1889); *Lilford, Col. Fig. Brit. B.* pt. xiv. pl. — (1890); *Seeb. B. Jap. Emp.* p. 254 (note) (1890); *Rchnw. J. f. O.* 1890, pp. 83, 84; *Hume, Nests and Eggs (Oates ed.)*, iii. p. 292 (1890); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Dub. Faun. Vert. Belg., Ois.* ii. p. 477, pl. 263 (1892).

Fuligula ferruginea, *Steph. Gen. Zool.* xii. 2, p. 205 (1824); *Harting, Handb. Brit. B.* p. 64 (1872).

Platypus leucophthalmus, *Brehm, Lehrb. Nat. eur. Vög.* ii. p. 834 (1824); *Pässler, J. f. O.* 1856, p. 67 (Anhalt).

Aythya leucophthalmos, *Brehm, Isis*, 1830, p. 999; *id. Vög. Deutschl.* p. 917 (1831).

Nyroca leucophthalmos, *Flem. Brit. An.* p. 121 (1828); *Eyt. Mon. Anat.* p. 160, pl. 13 (skeleton and trachea) (1838); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Brehm, Vogelf.* p. 380 (1855); *Eyt. Syn. Anat.* p. 118 (1869); *Tacz. J. f. O.* 1870, p. 56 (Algeria); *Gould, B. Gt. Brit.* v. pl. 21 (pt. xxi., 1872).

Fuligula leucophthalma, *Gould, B. Eur.* v. pl. 368 (1837); *C. Dub. Pl. Col. Ois. Belg.* iii. p. 279 (1857); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 46 (1882).

Nyroca leucophthalma, *Bp. Comp. List*, p. 58, n. 423 (1838); *id. Cat. Met. Ucc. Eur.* p. 73 (1842); *G. R. Gr. Gen. B.* iii. p. 621, n. 4 (1844); *Rchnb. Syn. Av.*, Natatores, t. 75. ff. 128–130 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 147 (1846); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Bp. Compt. Rend.* xliii. p. 651, n. 138 (1856); *Loche, Cat. M. et O. Algér.* p. 144 (1858); *Salv. Ibis*, 1859, p. 364 (E. Atlas); *Adams, P. Z. S.* 1859, p. 190 (Cashmere); *Sclat. P. Z. S.* 1859, p. 442; *Tristr. Ibis*, 1860, p. 81 (N. Africa); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Pelz. J. f. O.* 1864, pp. 73, 74; *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Shell. Ibis*, 1871, p. 316 (Egypt); *id. B. of Egypt*, p. 288 (1872); *Fritsch, J. f. O.* 1872, p. 371 (Bohemia); *Garrod, P. Z. S.* 1878, p. 479; *Koenig, J. f. O.* 1888, p. 285 (Algeria) *.

Nyroca africana, *G. R. Gr. List B. Brit. Mus.* iii. p. 144 (1844); *Salvad. El. Ucc. Ital.* p. 263 (1886).

Nyroca obsoleta, *Brehm, Vogelf.* p. 380 (1855); *id. Naumannia*, 1855, p. 298.

Aethyia nyroca, *Goeb. J. f. O.* 1870, p. 182; *B., Bl., R. & S. J. f. O.* 1877, p. 338; *Goeb. J. f. O.* 1879, p. 272.

Fulix nyroca, *Salvad. Faun. d'Ital., Ucc.* p. 265 (1872); *Gigl. Icon. Avif. Ital.* sp. 361, tav. 361 (1881); *Göldlin, J. f. O.* 1881, p. 190.

Nyroca ferruginea, *Sharpe & Dress. B. Eur.* vi. p. 581, pl. 438 (1872); *Dress. Ibis*, 1876, p. 421; *B. O. U. List Brit. B.* p. 130 (1883); *Sclat. List Vert. An.* 8th ed. p. 441 (1883); *Tristr. Faun. & Flor. Palest.* p. 117 (1884); *Clarke, Ibis*, 1884, p. 147 (Slavonia and Hungary); *C. Swinh. & Barnes, Ibis*, 1885, p. 138 (C. India); *Deditius, J. f. O.* 1885, p. 206; *Tait, Ibis*, 1887, p. 377 (Portugal); *Evans, Ibis*, 1891, p. 73 (incubation); *Sharpe, Sec. Yark. Miss., Aves*, p. 132 (1891); *id. Cat. Osteol. Specim. Coll. Surg.* iii. p. 306 (1891); *Pleske, Mél. Biol.* xiii. p. 299, n. 173 (1892); *Oust. Nouv. Arch. du Mus.* (3) vi. p. 102 (Turkestan) (1894).

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* Quid *Nyroca leucophthalma*, Gosse, B. Jam. p. 408 (1847); Albrecht, J. f. O. 1862, p. 267; March. Pr. Philad. Acad. 1864, p. 72 (from Jamaica); Léot. Ois. Trinid. p. 524 (Trinidad!) (1866); Chapm. Bull. Am. Mus. N. H. vi. p. 86 (1894)?

Marila nyroca, "*Flem.*" (errore), *Seeb. Hist. Brit. B.* iii. p. 570, in *syn.* F. nyrocæ (1885).

Ilyonetta nyroca, *Heine & Rchnw. Nomencl. Mus. Hein. Orn.* p. 347 (1890).

Hybrids.

Fuligula nyroca × F. cristata, *Selys, Bull. Ac. R. Brux.* xxiii. 2, p. 15 (1856); *Leverk. J. f. O.* 1890, p. 224, n. 10.

Fuligula nyroca × F. marila, *Leverk. l. c.* n. 11.

Fuligula nyroca × Aix sponsa, *Lavison, Bull. Soc. imp. Zool. d'Acclim.* x. p. 646 (1863); *Leverk. J. f. O.* 1890, p. 225, n. 12.

Adult male. Head, neck, and upper breast rich chestnut; a small white spot on the chin; round the middle of the neck a brownish collar, more or less blackish; back, scapulars, rump, and upper tail-coverts blackish brown, the scapulars indistinctly dusted with brown-chestnut; lower part of the breast, belly, and under tail-coverts white; sides and flanks brown, tinged with chestnut; sides of the vent brown, freckled with white; wings blackish brown; a white speculum on the secondaries, bordered posteriorly by a black band; tertials with a dark green gloss; outer primaries dark brown on the outer web and at the tip, white on the inner web, the remainder white also on the outer web, but tipped with dark brown; under wing-coverts, except the marginal ones, which are brown, white like the axillaries; tail blackish brown: beak and legs dark lead-colour, darker on the webs; irides white. Total length about 16 inches, wing 7·75, tail 2·4, culmen 2·25, tarsus 1·12.

Female. Similar to the male, but duller; the chestnut of the head browner, and that of the chest suffused with white and less clearly defined from the white of the underparts, which is more or less tinged with brown; the feathers of the mantle and scapulars, like those of the flanks, have buffish-brown pale edges (*Seebohm*).

Young in first plumage. Head and neck brown, with scarcely a chestnut tinge on the sides of the head; breast and underparts brown, paler, almost whitish, on the abdomen; under tail-coverts dull whitish (*Mus. Turin*).

Young in down are dark brown on the upper parts, with pale spots on wings and scapulars; underparts buff, shading into brown on the flanks (*Seebohm*).

Hab. Western Palæarctic Region, as far east as the valley of the Obb; breeds in the basin of the Mediterranean, in Central and Eastern Euope, and in Western Asia as far as Cashmere; in winter it extends in Africa as far south as the Canaries on the West and Abyssinia on the East, in Asia as far south as India and Arrakan.

a. ♂ ad. st.	England.	Purchased.
b. ♂ imm. st.	No locality.	Old Coll.
c. ♂ ad. st.	Europe.	Old Coll.
d. ♂ ad. st.	Europe.	Gould Coll.
e. ♀ ad. st.	Norfolk.	Purchased.
f, *g*. ♂ ad. sk.	Fayoom, Egypt, March (*G. E. S.*).	Shelley Coll.

h. ♂ juv. sk.	Adalia, Asia Minor, Dec. (*C. G. Danford*).	Seebohm Coll.
i. ♂ juv. sk.	Arabian Sea (220 miles from land).	J. E. Harting, Esq. [P.].
k, l, m. ♂ ♀ ad. et juv. sk.	Lenkoran, Nov.	Seebohm Coll.
n. ♀ ad. sk.	Ala Kul, Turkestan, May.	Dr. O. Finsch [C.].
o. Juv. sk.	Yarkand, Aug. (*F. Stoliczka*).	India Museum [P.].
p. Imm. sk.	Thibet.	Earl Gifford [P.].
q. Imm. sk.	Cashmere.	Hume Coll.
r. ♂ ad. sk.	Kandahar, Feb.	Lt.-Col. Swinhoe [P.].
s. ♂ ad. sk.	Kandahar, Feb. (*Lt.-Col. Swinhoe*).	Seebohm Coll.
t. ♀ imm. sk.	Machi, May.	Lt.-Col. Swinhoe [P.].
u, v. ♂ ♀ ad. sk.	Sukkur, Sind, Nov. (*A. O. H.*).	Hume Coll.
w. ♂ ad. sk.	Hamal Mehur, Upper Sind, Jan. (*A. O. H.*).	Hume Coll.
x, y. ♂ ad. sk.	Larkhana, Upper Sind, Jan. (*A. O. H.*).	Hume Coll.
z. ♂ ad. sk.	Ranepur, Sind, Feb.	India Museum [P.].
a'. Juv. sk.	Hills N. of Mussoorie (*Wilson*).	Hume Coll.
b'. Juv. sk.	Etawah.	Hume Coll.
c', d'. ♂ ad. sk.	Oudh, Jan., Feb.	Hume Coll.
e'. ♂ ad. sk.	Oudh.	Capt. Stackhouse Pinwill [P.].
f'–k'. ♂ ad. sk. & st. et juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].
l'. Juv. sk.	Nepal (*Hodgson*).	India Museum [P.].
m'. Juv. sk.	Sikkim (*L. Mandelli*).	Hume Coll.
n'. Juv. sk.	Darjeeling.	India Museum [P.].
o'. ♀ ad. st.	Gwalior.	C. Maries, Esq. [P.].
p', q'. ♂ ad. sk.	Bengal (*Falconer*).	India Museum [P.].
r'. ♂ ad. sk.	Calcutta Bazaar, Feb.	Colonel Biddulph [P.].
s'. ♂ ad. sk.	Calcutta Bazaar, Feb. (*Biddulph*).	Tweeddale Coll.
t'. ♂ ad. sk.	Calcutta.	Hume Coll.
u'. ♂ juv. sk.	Dinapur, Oct.	Hume Coll.
v'. ♂ ad. sk.	Behar.	B. H. Hodgson, Esq. [P.].
w'. ♂ ad. sk.	Lob-nor, Feb. (*Prjevalsky*).	Seebohm Coll.
x'. Pull. st.?		Purchased.
y'. Skeleton (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].
z'. Skeleton.		
a''. Sternum.	England.	John Ray, Esq. [P.].
b''. Sternum (with shoulder-girdle).	England.	G. Ingall, Esq. [P.].

Nyroca africana × *Fuligula fuligula.*

c''. Ad. st.		Zoological Society.

6. Nyroca innotata. (Plate IV.)

Aythia nyroca, *A. Milne-Edw.* (*nec Güldenst.*) *Compt. Rend.* xci. p. 1036, n. 97 (Madagascar) (1880); *Humbl. Arch. des Mus.* (3) viii. p. 156 (Madagascar) (1882); *Milne-Edw. & Grand. Ois. Madag.* p. 734, pl. 275 *a.* f. 4 (head) (1882).

Nyroca innotata, *Salvad. Bull. Br. Orn. Club,* no. xx. p. ii (1894); *id. Ibis,* 1895, p. 136.

Adult male. Very similar to the male of *N. africana*, from which it differs in having the head and neck of a much darker and more glossy chestnut; also the chestnut colour of the breast is darker; there is no distinct blackish-brown collar round the neck, separating the chestnut upper portion from the lower one; no white spot on the chin; back and scapulars brown with no wavy lines, nor minutely sprinkled with white. Size nearly the same as that of *N. africana*: "iris white; bill bluish grey, with the base and the edges black; feet greenish brown" (*Grandidier*). Total length about 15·5 inches, wing 7·8, tail 2·5, culmen 1·75, tarsus 1·2.

I have seen a second specimen in Rothschild's collection, absolutely identical with the type.

Hab. Madagascar.

a. ♂? ad.	Betsileo, Madagascar.	Rev. J. Shaw [C.]. (Type of species.)

7. Nyroca australis.

Nyroca australis, *Gould, MSS.*; *Eyton, Mon. Anat.* p. 160 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 144 (1844); *id. Gen. B.* iii. p. 621, n. 5 (1844); *Gould, B. Austr.* vii. pl. 16 (pt. xxvii., 1847); *Rchnb. Syn. Av.*, Natatores, t. 2326–27 (1850) (*ex Gould*); *Licht. Nomencl. Av.* p. 102 (1854); *Bp. Compt. Rend.* xliii. p. 651, n. 139 (1856); *Gould, Handb. B. Austr.* ii. p. 377 (1865); *Rams. Ibis,* 1867, p. 414; *Müll. P. Z. S.* 1869, p. 280 (Melbourne); *Eyt. Syn. Anat.* p. 118 (1869); *Marie. Act. Soc. Linn. Bord.* xxvii. p. 328 (New Caledonia) (1870); *Hutt. Trans. & Pr. N. Z. Inst.* ii. p. 78 (New Zealand) (1870); *id. Ibis,* 1870, p. 395 (Auckland); *Buller, ibid.* p. 45; *Hutt. Cat. B. New Zeal.* p. 38 (1871); *G. R. Gr. Hand-list,* iii. p. 87, n. 10694 (1871); *Finsch, J. f. O.* 1872, p. 188; *Buller, Hist. B. New Zeal.* p. 257 (1873); *Finsch, J. f. O.* 1874, p. 202; *Sharpe, Voy. Ereb. & Terr., Birds,* p. 31 (1875); *Marie, Ibis,* 1877, p. 363 (New Caledonia); *Diggl. B. Austr.* ii. pl. 116 (1877); *Rams. P. Z. S.* 1877, p. 347 (Herbert River district); *id. Pr. Linn. Soc. N. S. W.* i. pp. 195, 216, 219 (1877); *Casteln. & Rams. l. c.* p. 386 (Norman River, Gulf of Carpentaria) (1877); *Rams. op. cit.* ii. p. 200, n. 662 (1878), iii. p. 154 (bulla ossea) (1878); *Layard, Ibis,* 1882, pp. 538, 544 (N. Caledonia); *Buller, Man. B. New Zeal.* p. 72 (1882); *id. Hist. B. New Zeal.* 2nd ed. ii. p. 275 (1888); *Rams. Tab. List,* p. 22, n. 674 (1888); *North, Cat. Nests & Eggs Austr. B.* p. 345 (1889); *Wiglesw. Aves Polyn.* p. 71 (syn. emend.) (1891); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 306 (1891); *Buller, Trans. & Pr. N. Z. Inst.* xxv. 1892, p. 63 (1893).

Fuligula australis, *Schleg. Mus. P.-B.*, Anseres, p. 30 (1866); *Sclat. P. Z. S.* 1880, p. 526; *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *Legge, Pr. R. Soc. Tasm.* 1886, p. 245 (Tasmania) (1887); *Tristr. Cat. Coll. B.* p. 48 (Tasmania) (1889); *Hartert, Kat. Vogelsamml.* p. 233 (1891).

Anas australis, *Gieb. Thes. Orn.* i. p. 345 (1872) (syn. emend.).
Ilyonetta australis, *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 347 (1890).
Fuligula baeri, *Rothsch. & Hartert (nec Radde), Zool. Res.* i. [p. 684 (Waigiou and Arfak) (1894).

Adult male. Head, neck, and breast dark brown-chestnut; back and scapulars dark brown, each feather with olive-brown edges; rump uniform dark brown; abdomen white, but the lower part of it brown; sides brown, each feather with paler edges; wings brown with an olive gloss; speculum white, tipped with brown; primaries white, with the outer web and tip brown, the first three have the inner web more or less greyish brown near the shaft; under wing-coverts white, except the marginal ones, which are brown; tertials brown, with an olive gloss; tail brown: "irides white; bill black, with a dark slate-blue band at the tip [nail black]; front of tarsi very light grey, behind darker; toes very light grey, membranes black, bordered with light grey on the side of each toe" (*Hutton*). Length about 20 inches, wing 8·75, tail 2·5, culmen 1·9, tarsus 1·6.

Female. Similar to the male, but rather smaller and duller, having scarcely any tinge of chestnut on the head and neck, which are brown.

Young male. Has the chestnut-brown colour much lighter and the feathers of the back margined with pale brown; it has also less gloss on the head, and the brownish white of the underparts mottled with brown (*Buller*).

Hab. Australia, Tasmania, New Zealand, Aucklands, New Caledonia, and Papuan Islands, westwards as far as Waigiou.

a. ♂ ad. st.	No locality.	
b. ♂ ad. st.	Australia.	Purchased.
c. Juv. st.	Australia.	Lady Carrington [P.].
d. ♂ ad. sk.	Australia.	Sir D. Cooper [P.].
e. ♂ ad. sk.	Australia.	Gould Coll.
f, *g*, *h*. ♀ ad. et juv. sk.	Australia.	Salvin-Godman Coll.
i, *k*. ♂ ad. et imm. sk.	New South Wales.	Australian Museum [P.].
l. ♂ ad. sk.	Lawrence River (*Irving*).	Salvin-Godman Coll.
m. ♂ ad. sk.	S. Australia.	Capt. Sir G. Grey [P.].
n. Juv. sk.	Tasmania.	H. J. Elwes, Esq. [P.].

8. Nyroca brunnea.

Anas capensis, *Cuv.* (*nec Gm.*), *Mus. Paris.*; *Less. Tr. d'Orn.* p. 632, n. 39 (1831) (descr. incompl.); *Pucher. Rev. et Mag. Zool.* 1850, p. 545; *Hartl. J. f. O.* 1855, p. 419; *Gieb. Thes. Orn.* i. p. 346 (part.) (1872).
Fuligula capensis, *Smith, Cat. South Afr. Mus.* p. 36, n. 330 (1837) (descr. nulla); *Schleg. Mus. P.-B.*, Anseres, p. 31 (1866); *Sclat. P. Z. S.* 1880, p. 526; *Rchnw. Orn. Centralb.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 46 (1882); *Tristr. Cat. Coll. B.* p. 48 (1889); *Hartert, Kat. Vogelsamml.* p. 232 (1891); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 26 (Kibáya, Massai) (1894).

? Fuligula lateralis, *Smith, Cat. South-Afr. Mus.* p. 36, n. 331 (1837) (descr. nulla).

Nyroca brunnea, *Eyt. Mon. Anat.* p. 161, pl. 23 (1838); *G. R. Gr. Gen. B.* iii. p. 621, n. 6 (1844); *Strickl. & Sclat. Contr. Orn.* 1852, p. 160 (Damara); *Bolle, J. f. O.* 1856, p. 165 (Zool. Gard.); *Layard, Birds S. Afr.* p. 355 (1857); *Eyt. Syn. Anat.* p. 119 (1869); *Ayres, Ibis,* 1871, p. 266; *Boc. Jorn. Ac. Sc. Lisboa,* 1871, p. 278, 1872, p. 70.

Fuligula mariloides, *Blyth* (*nec Varrell*), *J. A. S. B.* xii. p. 180 (Cape of Good Hope) (1843); *id. Cat. B. Mus. A. S. B.* p. 386, n. 1786 (1849).

Nyroca capensis, *Pucher. Rev. et Mag. Zool.* 1850, p. 548; *Hartl. J. f. O.* 1855, p. 419.

Aythia capensis, *Bp. Compt. Rend.* xliii. p. 651, n. 141 (1856); *G. R. Gr. Hand-list,* iii. p. 86, n. 10962 (1871); *Gurn. in Anderss. B. Damara-L.*, p. 342 (1872); *Boc. Jorn. Ac. Sc. Lisboa,* 1873, p. 290; *id. J. f. O.* 1876, p. 294 (Mossamedes); *id. Orn. Ang.* p. 505 (1881); *Butl., Feild. & Reid, Zoolog.* 1882, p. 428 (Natal); *Dubois, Bull. Mus. Roy. H. N. de Belg.* iv. p. 150, n. 195 (Tanganyika) (1886); *Kuschel, J. f. O.* 1895, p. 84 (egg).

Fuligula brunnea, *Gurn. Ibis,* 1864, p. 355 (Natal); *Sclat. List Vert. An.* 8th ed. p. 440 (1883); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 248 (Shoa) (1884).

Fuligula nyroca, *Chapm.* (*nec Güldenst.*) *Trav. in South Afr.*, App. p. 423 (1868).

Fuligula meridionalis, *Hartert, Kat. Vogelsammi.* p. 233, note (1891).

Aythya capensis, *Shelley, Ibis,* 1894, p. 478 (Zomba).

Adult male. Head and upper part of the neck dark chestnut with a purple gloss, upper part of the head and nape darker, almost black; lower neck black, changing into brown-black on the upper parts; mantle and scapulars finely speckled with pale brown; breast brown, changing into glossy greyish brown on the lower parts; flanks with a reddish-brown tinge; wings glossy blackish brown, the smaller wing-coverts finely speckled with paler brown; a white speculum on the secondaries, bounded posteriorly by a broad black band; tertials with a dark green gloss; outer primaries blackish brown, greyish brown on the inner web, which has the inner half white; the inner primaries gradually become white also on the outer web; all have the tip brown-black; under wing-coverts, except the central ones which are whitish, and axillaries brown; tail brown: bill bluish grey (*Antinori*), or "lead-coloured, except the nail, which is black, as are also the legs, toes, and webs; irides cherry-coloured" (*Andersson*). Total length 19·5 inches, wing 9·12, tail 3, culmen 1·9, tarsus 1·3.

Female. General colour brown, paler on the underparts; the feathers at the base of the bill, throat, sides of the upper parts of the neck, and a band behind the eyes whitish; scapulars, feathers of the back and of the flanks with paler edges; wings as in the male, but paler, and less white on the inner web of the outer primaries and at the base of the inner ones.

Hab. Southern Africa from the Cape to Angola on the West, and to Shoa on the East.

a, b. ♂ ♀ ad. sk.	Rio Coroca, W. Africa, Jan. (*Anchieta*).	Shelley Coll.
c. ♂ ad. st.	Damara-land.	C. J. Andersson, Esq. [P.].
d. ♀ ad. sk.	Damara-land.	Tweeddale Coll.
e, f. ♂ ♀ ad. sk.	S. Africa.	Sir A. Smith [P.]. (Types of the species.)
g. ♀ ad. sk.	Reit Pan, Rhenoster R., Cape Colony, May (*T. Ayres*).	J. H. Gurney, Esq. [P.].
h. ♂ ad. sk.	Port Natal (*Ayres*).	Shelley Coll.
i. ♀ juv. sk.	Natal.	Eyton Coll.
k. ♀ ad. sk.	Newcastle, Natal, Sept.	Capt. S. G. Reid [P.].
l. ♂ ad. sk.	Transvaal (*T. Ayres*).	Tweeddale Coll.
m, n. ♂ ♀ ad. sk.	Transvaal (*T. Ayres*).	Shelley Coll.
o. ♂ ad. sk.	Near Potchefstroom (*T. Ayres*).	J. H. Gurney, Esq. [P.].
p. [♀] ad. sk.	Marico.	F. A. Barrett, Esq. [P.].
q. ♂ ad. sk.	Zambesi.	Dr. Bradshaw [C.].
r, s, t. ♂ ♀ ad. et ♀? sk.	Zomba R., Nyassa-land, May, June (*A. Whyte*).	H. H. Johnston, Esq., C.B. [P.].

9. Nyroca nationi.

Fuligula nationi, *Sclat. & Salv. P. Z. S.* 1877, p. 522 (Lima); *Sclat. P. Z. S.* 1878, p. 477, pl. xxxii.; *Garrod, l. c.* p. 479 (trachea); *Tacz. Orn. Pér.* iii. p. 484 (1886); ? *MacFarl. Ibis*, 1887, p. 203 (Arica and Mollendo); *Berl. & Stolzm. P. Z. S.* 1892, p. 399.

Type. Very similar to the male of *N. brunnea*, but the brown colour of the underparts apparently a little more reddish.

Another specimen, marked male, cannot be distinguished from some adult males of *N. brunnea*!

I believe both specimens mentioned below to be males, and although similar to those of the African *N. brunnea*, I refrain for the present from uniting *N. nationi* with the African species, and prefer waiting for the reception of additional South-American specimens.*

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* NYROCA ERYTHROPHTHALMA.

Anas erythrophthalma, *Wied, Beitr.* iv. p. 929 (Villa de Belmonte, S. Brazil) (1832); ? *Hartl. Verz. Ges. Mus.* p. 119 (Brazil) (1844) †; *Bp. Compt. Rend.* xliii. p. 649, n. 73 (1856); *Burm. Syst. Uebers. Thiere Bras.* iii. p. 438 (1856); *Pelz. Orn. Bras.* p. 460 (1870); *G. R. Gr. Hand-list*, iii. p. 82, n. 10653 (1871); *Gieb. Thes. Orn.* i. p. 350 (1872); *Salv. Ibis*, 1874, p. 319 (type); *Sclat. & Salv. P. Z. S.* 1876, p. 399 (note); *Allen, Bull. Am. Mus. N. H.* ii. p. 269 (types) (1889).

Only known from the types in the American Museum of Natural History in New York; thanks to Mr. Allen, these, after my departure from London, were sent for inspection to Mr. Salvin, who writes to me as follows:—

"The types of *Anas erythrophthalma*, Wied, are in old worn and faded

† Dr. Hartlaub writes to me that the specimen attributed by him to this species in 1844 is no longer in the Bremen Museum.

The only specimens known of *N. nationi* are those mentioned below, and I do not know whether those mentioned by MacFarlane really belong to this species.

Hab. Vicinity of Lima, Peru.

a. Ad. sk.	Lima, Peru (*Prof. Nation*).	Salvin-Godman Coll. (Type of species.)
b. ♂ ad. sk.	Lima, Peru (*Prof. Nation*).	Salvin-Godman Coll.
c. Trachea with bulla ossea.	Lima, Peru (*Prof. Nation*).	Salvin-Godman Coll.

45. FULIGULA.

	Type.
Fuligula, *Steph. Gen. Zool.* xii. 2, p. 187 (1824) (*cf. Sundev. Meth. nat. Av. disp. Tent.* p. 148)	F. fuligula.
Platypus, pt., *Brehm, Lehrb. d. Naturg. Eur. Vög.* ii. pp. 805, 999 (1824) (*nec Shaw*, 1799).	
Fulix, *Sundev. Kongl. Vet.-Ak. Handl. Stockh.* 1835, p. 129 (1836) (=Platypus *and* Hydrobates); *Baird, B. N. Am.* p. 790 (1858)	F. fuligula.
Marila, *Bp. Compt. Rend.* xliii. p. 651, gen. 48 (1856) (*nec Rchnb.* 1852)	F. marila.
Nettarion, *Baird, B. N. Am.* p. 790 (1858).....	F. fuligula.

Range. Northern Hemisphere and New Zealandian subregion.

Key to the Species.

a. Speculum white, tipped with black.
  a'. Back and scapulars in adult males greyish white, irregularly waved or zigzagged with black; no distinct crest; abdomen white.
    a''. Head, neck, and chest uniform black, the first with a dark green gloss ..... *marila*, p. 355.
    b''. Head, neck, and chest uniform black, the first with a purplish gloss ..... *affinis*, p. 360.
  b'. Back and scapulars in adult males black, usually sprinkled with whitish.
    c''. A long pendent occipital crest in adult males; abdomen white ..... *fuligula*, p. 363.

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plumage, the wings of the male are imperfect, the quills lost, and the speculum not visible on any of the remaining feathers.

"The most nearly allied species are *Nyroca brunnea*, Eyt., and *Nyroca nationi*, and from these the male hardly differs in plumage, inclining rather to *N. brunnea* in colour than to *N. nationi*. The sides of the head and upper neck are rather lighter and redder, but this may be due to fading. The bill and legs are now of a pale yellowish-brown; in both *N. brunnea* and *N. nationi* they are quite dark. In size the bill agrees very nearly with *N. brunnea*, but is perhaps slightly higher at the base."

According to Prince Neuwied: "iris vermilion-red; bill at the tip of a plumbeous colour, greenish olive on the basal portion; the legs appear to have been dull plumbeous."

"The *female* agrees very closely with that of *Nyroca brunnea*. The distribution of white on the face and throat is similar in the two birds, but less in extent in *N. erythrophthalma*. The whole plumage, especially the under surface, is more ferruginous, as is often the case in some specimens of Anatidæ. As in the male, the bill and legs are now pale. The two birds are of the same size, the wing in each case measuring about 8 inches."

d''. No pendent occipital crest; abdomen dusky, waved with black and white irregular lines in adult males ..... *novæ zealandiæ*, [p. 368.

b. Speculum bluish grey; head, neck, and chest in adult males black, glossed with purple, and besides round the neck a more or less distinct collar of chestnut ..... *collaris*, p. 370.

1. Fuligula marila.

The Scaup.

Fuligula gesneri, *Ray*, *Syn.* p. 142, A. 6 (1713).

Glaucium minus striatum, *Briss. Orn.* vi. p. 416 (1760).

Anas marila, *Linn. S. N.* i. p. 196, n. 8 (1766); *Gm. S. N.* i. 2, p. 509, n. 8 (1788); *Lath. Ind. Orn.* ii. p. 853, n. 54 (1790); *Bonn. Enc. Méth.* i. p. 152 (1790); *Lath. Tr. Linn. Soc.* iv. p. 115 tab. xiv. ff. 3, 4 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 248 (1811); *Temm. Man. d'Orn.* p. 562 (1815); *Leach*, *Cat.* p. 39 (1816); *Vieill. N. D.* v. p. 127 (1816); *Dum. Dict. Sc. Nat.* vi. p. 374 (1817); *Temm. Man.* 2nd ed. ii. p. 865 (1820); *Licht. Verz. Doubl.* p. 85 (Iceland; Cyprus) (1823); *Less. Tr. d'Orn.* p. 632 (part.) (1831); *Temm. Man.* 2nd ed. iv. p. 545 (1840); *Schleg. Rev. Crit.* p. cxx (1844); *Naum. Vög. Deutschl.* xii. p. 88, Taf. 311 (1844); *Pässl. J. f. O.* 1853, p. 242 (Lapland); *Brehm, J. f. O.* 1854, p. 84 (Egypt); *Midd. Sibir. Reis.* ii. 2, p. 238 (1853); *Müll. J. f. O.* 1855, p. 232 (Provence); *Krüper, Naumannia*, 1857, p. 44 (Iceland); *Kittl. Denkw.* ii. pp. 313, 378, 401 (1858); *Blas. in Naum. Vög. Deutschl.* xiii. 2, p. 312 (1860); *Przew. Putesch. Ussur.* n. 210 (1870); *Homeyer, J. f. O.* 1870, p. 433 (E. Siberia); *Gieb. Thes. Orn.* i. p. 356 (part.) (1872).

? Anas subterranea, *Scop. Ann.* I. *Hist. Nat.* p. 67, n. 83 (1769) *.

Scaup Duck, *Penn. Brit. Zool.* ii. p. 586, n. 275, pl. 100 (1776); *Lath. Syn.* iii. 2, p. 500, n. 49 (1785).

Millouinan, *D'Aubent. Pl. Enl.* 1002; *Buff. Hist. Nat. Ois.* ix. p. 229 (1783).

Anas frenata, *Sparrm. Mus. Carls.* t. 38 (♀) (1786); *Bonn. Enc. Méth.* i. p. 144, pl. 31. f. 2 (1790); *Vieill. N. D.* v. p. 109 (=marila ♀) (1816).

Nyroca marila, *Flem. Phil. of Zool.* ii. p. 260 (1822); *id. Brit. An.* p. 122 (1828).

Aythya marila, *Boie, Isis*, 1822, p. 564; *Brehm, Isis*, 1830, p. 198; *id. Vög. Deutschl.* p. 912 (1831); *Bp. Cat. Met. Uec. Eur.* p. 73 (1842); *Fritsch, J. f. O.* 1872, p. 371 (Bohemia); *Stejn. Bull.*

According to Prince Neuwied: "bill plumbeous, like the legs; iris red, paler than in the male."

The present pale colouring of the bill and legs of the type specimens, nearly eighty years old, evidently is due to fading.

Hab. Villa de Belmonte, S. Brazil.

It seems extremely likely that the Brazilian *N. erythrophthalma* (Wied), the Peruvian *N. nationi*, and the African *N. brunnea* are one and the same species, which will have to stand under the name of *N. erythrophthalma*, common to South Africa and South America; the case would be similar to that of *Dendrocycna viduata* and *D. fulva*, which are also found in both continents, the latter species extending even to India.

* *Cf.* Naumann (V. D. xii. p. 88, note), who decidedly states that Scopoli's name applies to *A. tadorna* juv.

U.S. Nat. Mus. no. 29, p. 160 (Bering I.) (1885); *id. Pr. U.S. Nat. Mus.* x. p. 137 (Bering I., and Copper I.) (1887).

Anas marina (*errore?*), *Drap. Dict. Class. H. N.* iii. p. 135 (1823).

Fuligula marila, *Steph. Gen. Zool.* xii. 2, p. 198 (1824); *Savi, Orn. Tosc.* iii. p. 129 (1831); *Jen. Man.* p. 243 (1835); *Gould, B. Eur.* v. pl. 371 (1837); *Eyt. Mon. Anat.* p. 156 (1838); *Bp. Comp. List*, p. 58, n. 425 (1838); *Vig. Zool. Voy. Blossom*, p. 37 (1839); *Keys. & Blas. Wirbelth. Eur.* pp. lxxxvii, 230 (1840); *Selys-L. Faun. Belg.* p. 145 (1842); *Macgilliv. Man. Orn.* ii. p. 188 (1842); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Br. Mus.* iii. p. 143 (1844); *id. Gen. B.* iii. p. 621, n. 3 (1845); *Rchnb. Syn. Av.*, Natatores, t. 75. ff. 131–133 (1845); *id. Cat. Hodgs. Coll. B. M.* p. 147 (Nepal) (1846); *Degl. Orn. Eur.* ii. p. 453 (1849); *Blyth, Cat. B. Mus. A. S. B.* p. 306, n. 1787 (1849); *Licht. Nomencl. Av.* p. 102 (1854); *Wallengr. Naumannia*, 1854, p. 274; *Heugl. Syst. Uebers.* n. 702 (Egypt) (1856); *Swinh. Ibis*, 1860, p. 67 (China); *Powys, ibid.* p. 354 (Livitazza); *? Reinh. Ibis*, 1861, p. 13 (Greenland); *Swinh. Ibis*, 1861, p. 345 (N. China), 1862, p. 254 (Foochow), 1863, p. 434 (Formosa); *id. P. Z. S.* 1863, p. 324; *G. R. Gr. List Br. B.* p. 199 (1863); *id. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Jerd. B. of Ind.* iii. p. 814 (1864); *Tristr. P. Z. S.* 1864, p. 454 (Palestine); *Nordm. J. f. O.* 1864, p. 379 (Finland and Lapland); *Droste, ibid.* p. 428 (Borkum); *Schleg. Mus. P.-B.*, Anseres, p. 26 (Japan) (1866); *Whitely, Ibis*, 1867, p. 208 (Hakodadi); *Degl. Orn. Eur.* ii. p. 536 (1867); *Tristr. Ibis.* 1868, p. 328 (Palestine); *Droste, Vogelw. Borkum*, p. 206 (1869); *Gould, B. Gr. Brit.* v. pl. 24 (pt. xvi., 1869); *Droste, J. f. O.* 1869, p. 347 (Färoe); *Elwes & Buckl. Ibis*, 1870, p. 340 (Macedonia); *G. R. Gr. Hand-list*, iii. p. 86, n. 10686 (part.) (1871); *Shell. B. of Egypt*, p. 290 (1872); *Coues, Key*, p. 289 (1872); *Tacz. J. f. O.* 1873, p. 110 (Darasun); *Coues, B. N.-West*, p. 573 (part.) (1874); *Blanf. East. Pers.* ii. p. 302 (Caspian) (1876); *Seeb. & H.-Brown, Ibis*, 1876, p. 445 (Petchora); *Palmén, J. f. O.* 1876, p. 60 (Finland); *Tacz. ibid.* p. 202 (Ussuri); *id. Bull. Soc. Zool. Fr.* ii. p. 47 (1877); *id. Orn. Yost. Sibir.* p. 70 (1877); *Vian, Bull. Soc. Zool. Fr.* iii. pp. 59, 60 (1878); *Dress. B. of Eur.* vi. p. 565, pl. 436 (pts. 65, 66, 1878); *Blakist. & Pryer, Ibis*, 1878, p. 214 (Japan); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 264 (W. Siberia); *Hume, Str. Feath.* viii. p. 115, n. 970 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 272, pl. 36 (1880); *Sclat. P. Z. S.* 1880, p. 525 (part.); *Brandt, J. f. O.* 1880, p. 250 (St. Petersburg); *Bolau, J. f. O.* 1881, p. 64; *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 185 (1880), x. p. 98 (1882); *Rchnw. Orn. Centralbl.* 1882, p. 4; *id. Vög. zool. Gärt.* p. 45 (1882); *B. O. U. List Br. B.* p. 129 (1883); *Sclat. List Vert. An.* 8th ed. p. 440 (1883); *Tristr. Faun. & Flor. Palest.* p. 117 (1884); *Blakist. Amend. List B. Jap.* p. 9 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 423 (1884–85), *and Man. Brit. B.* p. 437; *Selat. P. Z. S.* 1885, p. 246 (var.); *Sceb. Hist. Brit. B.* iii. p. 579 (part.) pl. 64 (egg) (1885); *Newt. Enc. Brit.* 9th ed. xxi. p. 378 (1886); *Salvad. El. Uec. Ital.* p. 264 (1886); *Tristr. Cat. Coll. B.* p. 48 (1889); *Rchnw. J. f. O.* 1890, pp. 83, 84; *Seeb. B. Jap. Emp.* p. 256 (part.) (1890); *Lilford, Col. Fig. Brit. B.* pt. xv. pl. — (1890); *Styan, Ibis*, 1891, pp. 328, 497; *Campb. Ibis*, 1892, p. 245 (Corea); *Řiha, Orn. Jahrb.* iii. p. 261 (Bohemia) (1892); *Seeb. Ibis*, 1892, p. 400 (Tsu-shima); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 468, pl. 261 (1892); *Collett, Mindre vedr. Norges Fuglef.* 1881–92, p. 275 (1894); *H. J. & C. E. Pearson, Ibis*, 1859, p. 243 (Iceland).

Platypus marilus, *Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 830 (1824).
Aythya islandica, *Brehm, Isis*, 1830, p. 998, n. 1; *id. Vög. Deutschl.* p. 911 (1831).
Aythya leuconotos, *Brehm, Isis*, 1830, p. 998, n. 3; *id. Vög. Deutschl.* p. 913 (1831).
Fuligula gesneri, *Eyt. Cat. Br. B.* p. 58 (1836); *Jard. Br. Birds*, iv. p. 138, pl. 5 (1837); *Wright, Ibis*, 1869, p. 254.
Fuligula marina, *Sw. Class. B.* ii. p. 368 (1836).
Fuligula marilla, *Eyt. Mon. Anat.* p. 156 (1838); *id. Syn. Anat.* p. 114 (1869).
Platypus marila, *Schilling, J. f. O.* 1853, p. 378.
Fuligula islandica, *Brehm, Vogelf.* p. 381 (1855); *id. Naumannia*, 1855, p. 298.
Fuligula leuconotos, *Brehm, Vogelf.* p. 381 (1855); *id. Naumannia*, 1855, p. 298.
Marila frenata, *Bp. Compt. Rend.* xliii. p. 651, n. 135 (1856); *Loche, Cat. Mamm. et Ois. Algér.* p. 144 (Lake Halloula) (1858).
Fulix marila, *Cass. Pr. Acad. Philad.* 1862, p. 322 (Loo-choo I.); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *G. R. Gr. Hand-list*, iii. p. 86, n. 10686 (part.) (1871); *Swinh. P. Z. S.* 1871, p. 419 (China and Formosa); *id. Ibis*, 1873, p. 367, 1875, p. 457 (Hakodadi); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1339 (1873); *Swinh. Ibis*, 1875, p. 456 (Hakodadi); *David & Oust. Ois. Chine*, p. 507 (1877); *Radde, Ornis Caucas.* p. 462 (1884); *Tacz. P. Z. S.* 1888, p. 460 (Corea); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 305 (1891).
Anas (Fuligula) marila, *Radde, Reis. S. O.-Sibir.* ii. p. 375 (Baikal) (1863).
Platypus marila, *Dyb. & Parr. J. f. O.* 1868, p. 339 (Dauria).

Hybrids.

Fuligula marila × Nyroca leucophthalma, *Sclat. List Vert. An.* 8th ed. p. 440 (1883).
Fuligula marila × F. nyroca, *Leverk. J. f. O.* 1890, p. 225.
Fuligula marila × Clangula glaucion, *Leverk. J. f. O.* 1890, p. 225.

North America (F. nearctica).

Fuligula marila, *Bp. Ann. Lyc. N. Y.* ii. p. 393 (part.) (1826); *Bp. Syn.* p. 392 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 453 (part.) (1831); *Nutt. Man.* ii. p. 437 (part.) (1834); *Bp. Comp. List*, p. 58, n. 389 (part.) (1838); *Aud. B. Am.* vii. p. 355, pl. 498 (1843); *Giraud, B. Long Isl.* p. 321 (1844); *De Kay, N. Y. Zool.* ii. p. 323 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 143 (specim. *h*) (1844); *Denny, P. Z. S.* 1847, p. 40; ? *Cass. U.S. Expl. Exp., Mamm. & Orn.* p. 343 (Oregon) (1858); *Wied, J. f. O.* 1859, p. 176; *Heerm. P. R. R. Rep.* x. pt. iv. p. 70 (1859); *Wedd. & Hurdis, Natural. in Berm.* pp. 49, 86 (1859); ? *Reinh. Ibis*, 1861, p. 13 (Greenland); *G. R. Gr. Hand-list*, iii. p. 86, n. 10686 (part.) (1871); *Coues, Key*, p. 289 (1872); *id. Check-list*, n. 500 (1873); *id. Birds N.-West*, p. 573 (part.) (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 399 (Mazatlan); *Sclat. P. Z. S.* 1880, p. 525 (part.); *Coues, Check-list*, 2nd ed. p. 114, n. 720 (1882); *Brandt, J. f. O.* 1891, p. 268 (Sitka).
Fulix marila, *Baird, B. N. Am.* p. 791 (1858); *id. Cat. N. Am. B.* n. 588 (1859); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 258 (1860); *Ross, Canad. Natural.* April 1862; *Blakist. Ibis*, 1863, p. 147 (Brit. N. Am.); *Dress. Ibis*, 1866, p. 43 (Texas); ? *Brown, Ibis*, 1868, p. 426

(Vancouver); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (1869); *Allen, Bull. Mus. Comp. Zool.* iii. p. 183 (Kansas and Utah) (1872); *Snow, B. Kans.* p. 11 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mazatlan) (1874); *Ridgw. Nomencl. N. Am. B.* n. 614 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 18 (part.) (1884); *Coues, Key N. Am. B.* 2nd ed. p. 701, n. 720 (part.) (1884); *Nehrl. J. f. O.* 1885, p. 147; *Matschie & Ziemer, ibid.* p. 191 (Bering Sea).

? Fuligula mariloides, *Wied* (*nec Vig.*), *J. f. O.* 1859, p. 176 (Missouri).

Anas marila, *Mart. J. f. O.* 1859, p. 221 (Bermuda); *Walker, Ibis*, 1860, p. 166 (Godhavn, Greenland); *Gieb. Thes. Orn.* i. p. 356 (1872).

Aythya marila nearctica, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 161 (1885); *A. O. U. Check-list N. Am. B.* p. 119, n. 148 (1886); *Turner, Contr. N. H. Alaska*, p. 133 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 71 (1887); *Ridgw. Man. N. Am. B.* p. 103 (1887); *Richmond, Auk*, 1888, p. 19 (Mt. Vernon, Columbia); *Merrill, ibid.* p. 142 (Oregon); *Schalow, J. f. O.* 1891, p. 268; *Hatch, B. of Minnes.* p. 58 (1892); *Mackay, Auk*, 1894, p. 225.

Fuligula marila nearctica, *Hartert, Kat. Vogelsamml.* p. 232 (1891).

Eastern Asia (F. mariloides).

Fuligula marila, *Vig. Zool. Voy. 'Blossom,'* p. 31 (1839).

Fuligula mariloides, *Vig. Zool. Voy. 'Blossom,'* p. 31 (in text) (1839); *G. R. Gr. Gen. B.* iii. p. 621, n. 4 (part.) (1844); *Cass. Pr. Ac. Philad.* 1862, p. 322 (Loo-choo I.); *Sclat. P. Z. S.* 1873, p. 312 (Zool. Gard.); *Swinh. Ibis*, 1877, p. 147; *David & Oust. Ois. Chine*, p. 508 (1877); *Vian, Bull. Soc. Zool. Fr.* iii. p. 61 (1878); *Blakist. & Pryer, Ibis*, 1878, p. 215 (Yezo); *Sclat. P. Z. S.* 1880, p. 525; *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 45 (1882); *Sclat. List Vert An.* 8th ed. p. 440 (1883); *Styan, Ibis*, 1891, p. 497.

Fulix mariloides, *Swinh. P. Z. S.* 1873, p. 412 (Ningpo); *id. Ibis*, 1875, p. 457 (Hakodadi); *Blakist. & Pryer, Tr. As. Soc. Japan*, i. p. 99 (1882).

Aythia affinis mariloides, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 161 (1885); *Ridgw. Man. N. Am. B.* p. 103 (1887).

Fuligula marila, part., *Seeb. B. Jap. Emp.* p. 256 (1890).

Adult male. Head, neck, upper part of the breast and of the back black; sides of the head and upper neck glossed with green; rest of the back and scapulars white, narrowly barred with black; rump, upper and under tail-coverts black; lower breast, abdomen, and sides white; the vent somewhat greyish; the sides with black barrings; upper wing-coverts blackish, finely vermiculated with white; secondaries white, forming the speculum, which is bounded below by a blackish band, in some specimens more or less freckled with white; tertials blackish with a green gloss, the larger ones more or less finely dusted with whitish; primaries greyish brown, from the fourth quill with a whitish area on the inner web, the tips black; the marginal under wing-coverts greyish brown, dusted with white, the remainder, as well as the axillaries, white; tail blackish: bill and legs light lead-grey, webs and nail of the bill blackish; iris yellow. Total length about 18 inches, wing 9·25, tail 2·9, culmen 1·8, tarsus 1·4.

Female. Fore part of the head and chin white; rest of the head,

neck, and breast brown; upper parts dark brown, the back and scapulars slightly vermiculated with white; underparts white below the breast; flanks brown, more or less vermiculated with white; vent and under tail-coverts dark brown, slightly vermiculated with white; wings duller and browner than in the male, the upper wing-coverts much less vermiculated with white: bill and legs darker than in the male. Size somewhat less.

Young male has the white at the base of the bill like the adult female, but it is of a darker and richer colour.

Male in first nuptial dress has less green metallic gloss on the head and neck; the black breast-feathers have white margins; the black under tail-coverts are more or less vermiculated; in the vermiculations of the lower mantle, scapulars, and wing-coverts the dark brown predominates over the white.

Males in moulting plumage closely resemble adult females.

Young in down closely resemble those of the Tufted Duck (*Seebohm*): "crown, nape, and upper parts uniform dark olive-brown; throat, sides of the head, and fore part of the neck yellowish white; a dull greyish band crosses the lower neck, rest of the underparts dull yellowish, the flanks greyish yellow; upper mandible blackish, tooth of the beak yellowish; under mandible yellow" (*Dresser*).

According to Dr. Stejneger, the American form (*nearctica*) has the primaries, from the fourth quill, with a greyish—not white—area on the inner web. I must confess that I have not been able to appreciate the difference. Also the Eastern Asiatic birds are considered by the American ornithologists to belong to a distinct form, allied to *F. affinis*, but differing in having the "six inner primaries with a distinct white space on inner webs as in *F. marila*."

The Chinese and Japanese birds examined by me, and among them are those mentioned and described by Swinhoe as belonging to *F. mariloides*, Vig., are not constantly smaller than the Western birds (*marila*); sometimes they are intermediate between true *F. marila* and *F. affinis*, not only in size, but also in the colour of the head, which shows some purple reflections. Are these specimens hybrids?

Hab. Palæarctic Region, from Iceland to Kamtschatka, breeding in the Arctic Region as far north as lat. 70°; winters sparingly in the basin of the Mediterranean, but (to my knowledge) not reaching Abyssinia, as stated by Mr. Seebohm; it winters also in the basins of the Black Sea and Caspian; rare in Northern India; winters on Lake Baikal, China. Formosa, and Japan.

The Scaup inhabits also the Nearctic Region, breeding far northward; southwards in winter to Guatemala.

a. ♂ ad. sk.	No locality.	Tweeddale Coll.
b. ♀ ad. sk.	Tiree, Scotland, Aug.	Colonel Irby [P.].
c. ♀ ad. sk.	Firth of Forth, Scotland, Jan. (*R. G. W. R.*)	Tweeddale Coll.
d. ♂ ad. st.	Yarmouth, Norfolk.	Clark Kennedy, Esq. [C.].
e. ♂ ad. sk.	Walberswich, Norfolk, Feb. (*W. Tyler*).	Seebohm Coll.

f. ♂ imm. sk.	Beccles, Norfolk, Dec. (*T. E. Gunn*).	Seebohm Coll.
g, *h*. ♂ ♀ ad. sk.	Cambridge Market, Nov.	Salvin-Godman Coll.
i, *k*. ♂ ♀ ad. sk.	Cambridgeshire.	Purchased.
l. ♀ ad. st.	Milford Haven, Pembrokeshire.	Earl of Cawdor [P.].
m. ♀ ad. st.	Somersetshire.	Montagu Coll.
n. ♂ ad. sk.	Hampshire.	Montagu Coll.
o. ♂ ad. st.	Kingsbury Reservoir.	J. E. Harting, Esq. [P.].
p. ♂ ad. sk.	Langiorskaja, Ob, Sept.	Dr. O. Finsch [P.].
q, *r*. ♂ ♀ ad. st.	India.	Old Coll.
s. ♀ ad. sk.	Gurgaon, Delhi, March (*W. N. Chill*).	Hume Coll.
t. ♂ ad. sk.	Amoy, China, Jan (*R. Swinhoe*).	Seebohm Coll.
u. ♂ juv. sk.	Amoy, winter.	Salvin-Godman Coll.
v–*a'*. ♂ ♀ ad., imm., juv. sk.	Ningpo, China, Oct. (*R. Swinhoe*).	Seebohm Coll.
b', *c'*. ♂ ♀ ad. sk.	Hakodadi, Japan, April, May (*Blakiston*).	Seebohm Coll.
d', *e'*. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
f'. ♀ ad. sk.	Yokohama, Japan, Dec. (*R. Bergman*).	Tweeddale Coll.
g', *h'*, *i'*. ♂ ad. sk.	Nagasaki, Japan, Feb.	F. Ringer, Esq. [P.].
k', *l'*. ♂ ♀ ad. sk.	N. America.	H. J. Elwes, Esq. [P.].
m'–*q'*. ♂ ♀ imm. et pull. sk.	St. Michael's, Alaska, June, Aug., Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
r'. ♀ ad. sk.	Brit. Columbia.	J. K. Lord, Esq. [P.].
s'. ♂ ad. sk.	Vancouver's Island.	J. K. Lord, Esq. [P.].
t'. ♀ ad. sk.	Canada.	Government of Canada [P.].
u'. ♂ ad. sk.	Massachusetts, March (*H. W. Henshaw*).	Salvin-Godman Coll.
v', *w'*. ♀ ad. sk.	Corpus Christi, Texas, Oct. Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
x'. ♂ juv. sk.	Florida.	W. B. Dismore, Esq. [P.].
y', *z'*. Skeletons.	England.	Zool. Soc.

2. Fuligula affinis.

Anas marila, *Forst.* (*nec Linn.*) *Phil. Trans.* lxii. n. 44 (1772); *Wils. Am. Orn.* viii. p. 84, pl. 69. f. 3 (1814).

Fuligula marila, *Bp. Ann. Lyc. N. Y.* ii. p. 392 (part.) (1826); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 453 (part.) (1831); *Nutt. Man.* ii. p. 437 (part.) (1834; *Aud.* (*nec Linn.*) *Orn. Biogr.* iii. p. 226 (1835); *Bp. Comp. List*, p. 58, n. 389 (part.) (1838); *Aud. Orn. Biogr.* v. p. 614, pl. 229 (1839); *id. Syn.* p. 286 (1839); *id. B. Am.* vi. p. 316, pl. 397 (1843), *cf.* vii. p. 355 (1844); ? *G. R. Gr. List B. Brit. Mus.* iii. p. 143 (spec. *h*) (1844); *Jard. Ann. & Mag. N. H.* xx. p. 377 (Tobago) (1847); *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *Léot. Ois. Trinid.* p. 522 (Trinidad) (1866); *Seeb. Hist. Brit. B.* iii. p. 579 (part.) (1885).

Fuligula affinis, *Eyt. Mon. Anat.* p. 157 (1838); *Gosse, B. Jam.* p. 408 (1847); *Thomps. Nat. Hist. of Irel., Birds*, iii. p. 140 (1851); *Sclat. & Salv. Ibis*, 1859, p. 231 (Guatemala); *Albrecht*,

J. f. O. 1862, p. 207 (Jamaica); *Schleg. Mus. P.-B.*, Anseres, p. 28 (1866) (accidental in Holland!); *Degl. & Gerbe, Orn. Eur.* ii. p. 538 (1867); *Turnb. B. E. Pa.* p. 36 (1869); *Salv. P. Z. S.* 1870, p. 219 (Castillo, Veragua); *Coues, Key*, p. 289 (1872); *id. Check-list*, n. 501 (1873); *id. Birds N.-West*, p. 573 (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 399; *Vian, Bull. Soc. Zool. Fr.* iii. pp. 59, 60 (1878); *Sclat. P. Z. S.* 1880, p. 525; *Cory, B. Bahama I.* p. 187 (1880); *Coues, Check-list*, 2nd ed. p. 114, n. 721 (1882); *Salv. Cat. B. Strickl. Coll.* p. 537 (1882); *B. O. U. List Brit. B.* p. 130 (1883); *Hartl. J. f. O.* 1883, p. 282 (Alaska); *Saund. Yarrell's Hist. Brit. B.* iv. p. 427 (1884–85); *Seebh. Hist. Brit. B.* iii. pp. 580, 610 (1885); *Cory, List B. W. Ind.* p. 31 (1885); *Tristr. Cat. Coll. B.* p. 48 (1889); *Hartert, Kat. Vogelsamml.* p. 232 (Mexico) (1891); ? *Albarda, J. f. O.* 1892, p. 429 (S. Holland).

? Anas marila, *D'Orb.* (*nec Linn.*) *in La Sagra's Hist. Nat. Cub., Ois.* p. 295 (1840).

Fuligula minor, *Bell, Pr. Ac. Philad.* i. p. 141 (1842); *Giraud, B. Long Isl.* p. 323 (1844).

Aythya mariloides, part., *Bp. Cat. Met. Ucc. Eur.* p. 73 (1842).

Anas marila americana, *Schleg. Rev. Crit.* p. cxx (1844).

Fuligula mariloides, *G. R. Gr.* (*nec Vig.*) *Gen. B.* iii. p. 621, n. 4 (1844); *Rchnb.* (*nec Vig.*) *Syn. Av.*, Natatores, t. 80. ff. 2756–57 (1850) (*ex Audubon*); *Cab. & Gundl. J. f. O.* 1857, p. 230 (Cuba); *Wied, J. f. O.* 1859, p. 176; *Gundl. J. f. O.* 1862, p. 92 (Cuba), 1871, p. 290; *Rey, Synonym. eur. Brutv. u. Gäste*, p. 131 (1872); *Adams, Ibis*, 1878, p. 432 (Michalaski).

Fuligula melanocephala, *Licht. Nomencl. Av.* p. 102 (Mexico) (1854).

Marila affinis, *Bp. Compt. Rend.* xliii. p. 651, n. 136 (syn. emend.) (1856).

Fulix affinis, *Baird, B. N. Am.* p. 791 (1858); *id. Cat. N. Am. B.* n. 589 (1859); ? *A. & E. Newt. Ibis*, 1859, p. 366 (St. Croix); *Wheat. Ohio Agric. Rep.* 1860, n. 250; *Gundl. J. f. O.* 1861, p. 346; *Coues & Prent. Smiths. Rep.* 1861, p. 417; *Boardm. Pr. Bost. Soc.* iv. p. 129 (1862); *Verr. Pr. Ess. Inst.* iii. p. 159 (1862); *Blakist. Ibis*, 1863, p. 147 (Nelson River); *March, Pr. Acad. Philad.* 1864, p. 71 (Jamaica); *Allen, Pr. Ess. Inst.* iv. p. 88 (1864); *McIlvr. ibid.* v. p. 95 (1866); *Herm. in Dress. Ibis*, 1866, p. 43 (Texas); *Gundl. Repert. Fis.-Nat. Cuba*, i. p. 390 (1866); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Newt. P. Z. S.* 1867, p. 167 (egg); *Coues, Pr. Bost. Soc.* xii. p. 129 (1868); *id. Pr. Ess. Inst.* v. p. 299 (1868); *Lawr. Ann. Lyc. N. Y.* ix. p. 143 (Costa Rica) (1868), p. 210 (Yucatan) (1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (Yukon, breeding) (1869); *Salv. P. Z. S.* 1870, p. 219 (Veragua); *Mayn. Guide*, p. 148 (1870); *Coues, Pr. Ac. Philad.* 1871, p. 37; *Allen, Bull. Mus. Comp. Zool.* ii. p. 363 (part.) (1871); *G. R. Gr. Hand-list*, iii. p. 86, n. 10687 (syn. emend.) (1877); *Aiken, Pr. Bost. Soc.* xv. p. 210 (1872); *Snow, B. Kans.* p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Lawr, Mem. Bost. Soc. N. H.* ii. p. 375 (Mazatlan) (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 382 (Cuba), 1878, p. 190; *id. An. Se. Esp. Hist. Nat.* vii. p. 405 (Porto Rico) (1878); *Ridgw. Nom. N. Am. B.* n. 615 (1881); *Coues, Key N. Am. B.* 2nd ed. p. 701 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 22 (1884); *Nehrl. J. f. O.* 1885, p. 147 (Illinois); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 305 (1891).

Anas affinis, *Gieb. Thes. Orn.* i. p. 343 (1872).

Nyroca affinis, *A. & E. Newt. Handb. Jam.* p. 113 (1881).
Aythya affinis, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 161 (1885); *A. O. U. Check-list N. Am. B.* p. 119, n. 149 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 71 (1887); *Ridgw. Man. N. Am. B.* p. 103 (1887); *Cory, Auk*, 1888, p. 65; *Hatch, B. of Minnes.* p. 60 (1892); *Chapm. Bull. Am. Mus. N. H.* vi. p. 83 (Trinidad) (1894); *Mackay, Auk*, 1894, p. 225.
Fuligula marila, var. affinis, *Dubois, Faun. Vert. Belg., Ois.* ii. p. 468 (1892).

Hybrid.

Fuligula affinis × F. valisneria *or* F. americana, *Elliot, P. Z. S.* 1859, p. 437; *A. Newt. P. Z. S.* 1859, p. 337.

Adult male. Similar to that of *F. marila*, but much smaller, the black of head and neck glossed with purple instead of green; the back darker, the black markings on the white ground being coarser and broader; the upper wing-coverts much less vermiculated with white; the barring on the sides more distinct, and the longer feathers of the flanks pale brown, vermiculated with black; the under tail-coverts whitish, but the lateral ones with a rufous tinge, all vermiculated with blackish bars; primaries blackish, without whitish on the inner web, the latter being only a trifle paler than the rest of the quills: bill blue, nail black. Total length about 16 inches, wing 8·2, tail 2·5, culmen 1·75, tarsus 1·15.

Female. Similar to that of *F. marila*, but smaller, the white on the fore part of the head and chin more restricted; the white and brown barrings on the back and scapulars coarser; the pale brown on the breast paler and not so distinctly defined from the white of the underparts; barrings on the sides and flanks coarser.

Hab. North America in general, breeding northward, south in winter to Guatemala and West Indies.

a. ♂ ad. sk.	Vancouver's Island.	Salvin-Godman Coll.
b. ♂ juv. sk.	No locality.	Earl of Derby [P.].
c. ♂ ad. sk.	N. America.	Eyton Coll. (Type of the species.)
d. ♂ ad. sk.	N. America?	Hume Coll.
e. ♂ ad. sk.	N. America.	Lord Ampthill [P.].
f. ♂ ad. sk.	N. America (*H. W. Henshaw*).	Salvin-Godman Coll.
g. ♀ ad. st.	North Land Exp.	Capt. Sir G. Back [P.].
h. ♂ ad. sk.	Canada.	Government of Canada [P.].
i, k, l. ♂ ♀ ad. sk.	49th Parallel.	N. Amer. Boundary Comm. [C.].
m. ♂ ad. st.	Rocky River, Ohio.	Prof. J. P. Kirtland [P.].
n. ♂ ad. sk.	Riverdale, Illinois, March (*E. W. Nelson*).	Salvin-Godman Coll.
o. ♂ imm. sk.	Weaverville, N. California, April.	Salvin-Godman Coll.
p–z. ♂ ♀ ad. et juv. sk.	Corpus Christi, Texas, Jan., Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.

a', *b'*, *c'*. ♂ ♀ ad. et imm. sk.	Tarpon Springs, Florida, Nov., Dec. (*W. E. D. Scott*).	Salvin-Godman Coll.
d', *e'*. ♀ ad. sk.	Zacatecas, Mexico, June (*W. B. Richardson*).	Salvin-Godman Coll.
f', *g'*. ♂ imm. et ♂ juv. sk.	Dueñas, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
h'. ♀ ad. sk.	Dueñas, Guatemala, March (*O. S.*).	H. J. Elwes, Esq. [P.].
i'. ♀ ad. sk.	Castillo, Veragua (*Arcé*).	Salvin-Godman Coll.

3. Fuligula fuligula.

The Tufted Duck.

Anas cristata, *Ray*, *Syn.* p. 142 (1713).

Glaucium, *Briss. Orn.* vi. p. 406, pl. xxxvi. f. 1 (♂ juv.), 2 (♀) (1760).

Glaucium minus, *Briss. Orn.* vi. p. 411, pl. xxxvii. f. 1 (1760).

? Anas latirostra, *Brünn. Orn. Bor.* p. 21, n. 91 (1764).

Anas fuligula, *Linn. S. N.* i. p. 207, n. 45 (1766) (*ex Gesner*); *Scop. Ann.* I. *Hist. Nat.* n. 78 (1769); *Gm. S. N.* i. 2, p. 543, n. 45 (1788); *Lath. Ind. Orn.* ii. p. 869, n. 90 (1790); *Bonn. Enc. Méth.* i. p. 150 (1791); *Lath. Tr. Linn. Soc.* iv. p. 117 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 265 (1811); *Temm. Man. d'Orn.* p. 568 (1815); *Vieill. N. D.* v. p. 128 (1816); *Dum. Dict. Sc. Nat.* vi. p. 374 (1817); *Temm. Man. d'Orn.* 2nd ed. ii. p. 873 (1820); *Licht. Verz. Doubl.* p. 85 (Siberia) (1823); *Ranz. El. di Zool.* iii. pt. ix. p. 128 (1826); *Less. Tr. d'Orn.* p. 632 (1831) (syn. emend.); *Ménétr. Cat. Rais. Cauc.* p. 58 (Bakou) (1832); *K. E. Abbott, P. Z. S.* 1834, p. 134 (Trebizond); *Temm. Man.* 2nd ed. iv. p. 547 (1840); *Schleg. Rev. Crit.* p. cxix (1844); *Naum. Vög. Deutschl.* xii. p. 64, Taf. 310 (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 128 (1850); *Midd. Sibir. Reis.* ii. 2, p. 237 (1853); *Pässler, J. f. O.* 1853, pp. 242, 244, 318 (Lapland), 1854, p. 380 (Dauria); *Bolle, J. f. O.* 1855, p. 305 (Spain), 1856, p. 232 (Provence); *Kittl. Denkwurd.* ii. p. 313 (1858); ? *Walker, Ibis*, 1860, p. 166 (Godhavn); *Heugl. J. f. O.* 1862, p. 287; *Homey. J. f. O.* 1870, p. 433 (E. Siber.); *Gieb. Thes. Orn.* i. p. 352 (1872); *Rowl. Orn. Misc.* iii. p. 229, pl. cx. (1878); *Steere, List B. & M. Philippines*, p. 27 (Basilan) (1890).

Anatra col ciuffo, *Gerini, Stor. degli Ucc.* v. tav. 591, 592 (1776).

Anas clangula foem., *Gerini, Stor. degli Ucc.* tav. 594 (1776).

Tufted Duck, *Penn. Brit. Zool.* ii. n. 274 (1776); *Lath. Syn.* iii. 2, p. 540, n. 79 (1785).

Anas leucotis, *Herm. Tab. Aff. An.* p. 161 (1783); *id. Observ. Zool.* p. 144 (1804).

Morillon, *D'Aubent. Pl. Enl.* 1001; *Buff. Hist. Nat. Ois.* ix. pp. 227, 231, pl. 15 (1783).

? Lapmark Duck, *Penn. Arct. Zool.* ii. p. 576 (1785).

Anas glaucion, *Bonn.* (*nec Linn.*) *Enc. Méth.* i. p. 149, pl. 33. f. 3 (1791); *Dum. Dict. Sc. Nat.* vi. p. 375 (1817).

Anas colymbis, *Pall. Zoogr. Rosso-As.* ii. p. 266 (1811).

Anas cristata, *Leach* (*nec Gm.*), *Syst. Cat. M. & B. Br. Mus.* p. 39 (1816).

Nyroca fuligula, *Flem. Phil. of Zool.* ii. p. 260 (1822); *id. Brit. An.* p. 122 (1828).

Aythya fuligula, *Boie, Isis*, 1822, p. 564; *Brehm, Isis*, 1830, p. 998; *id. Vög. Deutschl.* p. 914 (1831); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 160 (Kamtschatka, Bering I.) (1885); *Ridgw. Man. N.*

Am. B. p. 103 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Commander I.).

Fuligula cristata, *Steph. Gen. Zool.* xii. 2, p. 190 (1824) (syn. emend.); *Savi, Orn. Tosc.* iii. p. 131 (1831); *Sykes, P. Z. S.* 1832, p. 170, n. 225 (Dukkun); *Gould, B. Eur.* v. pl. 370 (1837); *Eyt. Mon. Anat.* p. 159 (syn. emend.), pl. 3. f. 5 (sternum) (1838); *Bp. Comp. List*, p. 58 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvii, 230 (1840); *Jerd. Madr. Journ.* xii. p. 222, n. 390 (1840); *Ewer, P. Z. S.* 1842, p. 93; *Blyth, ibid.* p. 94; *Strickl. ibid.* p. 167 (China); *Bp. Cat. Met. Ucc. Eur.* p. 73 (1842); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. Gen. B.* iii. p. 621, n. 1 (syn. emend.) (1844); *id. List B. Brit. Mus.* iii. p. 142 (1844); *Rüpp. Syst. Uebers.* p. 138, n. 499 (Abyssinia) (1845); *Rchnb. Syn. Av.*, Natatores, t. 76. ff. 119–123 (1845); *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 147 (1846); *Blyth, Cat. B. Mus. A. S. B.* p. 306, n. 1788 (1849) (syn. emend.); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Wallengr. Naumannia*, 1854, p. 275; *Bolle, J. f. O.* 1855, p. 314 (Spain); *Bp. Compt. Rend.* xliii. p. 651, n. 133 (1856) *; *Heugl. Syst. Uebers.* n. 703 (1856); *Loche, Cat. M. et O. Algér.* p. 143 (1858); *Antin. J. f. O.* 1858, p. 484 (Smyrna); *Salv. Ibis*, 1859, p. 363 (Bizerta); *Swinh. Ibis*, 1860, p. 67 (Amoy); *Tristr. Ibis*, 1860, p. 81 (N. Africa); *Powys, ibid.* p. 354 (Ion. Is.); *Simps. ibid.* p. 394 (W. Greece); ? *Reinh. Ibis*, 1861, p. 14 (Greenland?); *Swinh. Ibis*, 1861, p. 345 (N. China), 1862, p. 254 (Foochow); 1863, p. 434 (Formosa); *id. P. Z. S.* 1863, p. 324; *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863); *Jerd. B. of Ind.* iii. p. 875 (India) (1864); *Tristr. P. Z. S.* 1864, p. 454 (Palestine); *Nordm. J. f. O.* 1864, p. 379 (Finland, Lapland); *Droste, ibid.* p. 428 (Borkum); *Schleg. Mus. P.-B.*, Anseres, p. 28 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 533 (1867); *Swinh. Ibis*, 1867, p. 399 (Amoy); *Przew. Voy.* n. 209 (1867); *Hartl. & Finsch, P. Z. S.* 1868, pp. 4, 9 (Pelew Isl.); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Drake, Ibis*, 1869, p. 15 (Morocco); *Sclat. P. Z. S.* 1869, p. 629 (breeding); *Elwes & Buckl. Ibis*, 1870, p. 340 (Macedonia); *Blanf. Geol. & Zool. Abyss.* p. 437 (1870); *Finsch, Tr. Zool. Soc.* vii. p. 329 (1870); *Przew. Putesch. Ussur.* n. 209 (1870); *Shell. Ibis*, 1871, p. 316 (Egypt); *Saund. Ibis.* 1871, p. 397 (S. Spain); *Gould, B. Gr. Brit.* v. pl. 27 (pt. xx., 1871); *H. & F. P. Z. S.* 1872, p. 90 (Pelew I.); *Tayl. Ibis*, 1872, p. 233 (Crimea); *Shell. B. of Egypt*, p. 290 (1872); *Homey. J. f. O.* 1872, p. 338 (N. Germany); *Fritsch, J. f. O.* 1872, p. 371 (Bohemia); *Salvad. Faun. d'Ital., Ucc.* p. 266 (1872); *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Garrod, P. Z. S.* 1873, p. 467 (carotids), p. 639 (muscles); *Swinh. Ibis*, 1873, p. 367; *Severtz. Turkest. Jevotn.* p. 70 (1873); *Tacz. J. f. O.* 1873, p. 110, 1874, p. 337; *Finsch, Journ. Mus. Godeffr.* Heft viii. p. 40 (Pelew Is.) (1875); *Palmén, J. f. O.* 1876, p. 59 (Finland); *Seeb. & H.-Brown, Ibis*, 1876, p. 445 (Petchora); *Blanf. East. Pers.* ii. p. 302 (Persia) (1876); *Tacz. Orn. Faun. Yost. Sibir.* p. 70 (1877); *id. Bull. Soc. Zool. Fr.* 1877, p. 47; *Blakist. & Pryer, Ibis*, 1878, p. 214 (Japan); *Seeb. Ibis*, 1879, p. 22; *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 264 (W. Siberia); *Hume, Str. Feath.* viii. p. 115, n. 971 (1879); *Dress. B. Eur.* vi. p. 573, pl. 437 (1879); *A. Newt. Enc. Brit.* 9th ed. x. p. 757 (1879); *Schmidt, P. Z. S.* 1880, p. 318; *Sclat. ibid.* p. 524; *Brandt, J. f. O.* 1880, p. 250 (St. Petersburg);

* Bonaparte (*l. c.*) and Schlegel mention among the synonyms *Anas notata*, Daud., which I have not been able to trace.

Hume & Marsh. Game B. of Ind. iii. p. 277, pl. 37 (1880) ; *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 186 (1880), x. p. 99 (1882) ; *Bolau, J. f. O.* 1881, p. 64 ; *Rchnw. Orn. Centralbl.* 1882, p. 5 ; *id. Vög. zool. Gärt.* p. 45 (1882) ; *Severtz. Ibis*, 1883, p. 77 (Pamir Range) ; *B. O. U. List Br. B.* p. 129 (1883) ; *Sclat. List Vert. An.* 8th ed. p. 439 (1883) ; *Tacz. Bull. Soc. Zool. Fr.* 1883, p. 344 (Kamtschatka) : *Dyb. & Tacz. Bull. Soc. Zool. Fr.* 1884, p. 147 ; *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 247 (Shoa) (1884) ; *Saund. Yarrell's Hist. Brit. B.* iv. p. 430 (1884–85) ; *Seeb. Hist. Brit. B.* iii. p. 583, pl. 64 (egg) (1885) ; *Kinb. in Sundev. Svenska Fogl.* ii. p. 1484, pl. lxii. f. 3 (1886) ; *Salvad. El. Uec. Ital.* p. 264 (1886) ; *Tait, Ibis*, 1887, p. 377 (Portugal) ; *Dörries, J. f. O.* 1888, p. 95 (E. Siberia) ; *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 323 (Shoa) (1888) ; *Tristr. Cat. Coll. B.* p. 48 (1889) ; *Everett, Ibis*, 1890, p. 263 (Borneo) ; *Rchnw. J. f. O.* 1890, pp. 83, 84 *Lilford, Col. Fig. Br. B.* pt. xiii. pl. — (1890) ; *Seeb. B. Jap. Emp.* p. 355 (1890) ; *Evans, Ibis*, 1891, p. 73 (incubation) ; *Styan, ibid.* pp. 318, 497 (Lower Yangtse) ; *Dub. Faun. Vert. Belg., Ois.* ii. p. 465, pl. 260 (1892).

Platypus fuligulus, *Brehm, Lehrb. d. Naturg. eur. Vög.* ii. p. 833 (1824) ; *Pässler, J. f. O.* 1856, p. 67 ; *Hintz, J. f. O.* 1861, p. 457, 1863, p. 430, 1864, p. 97 (Pomerania).

Anas (Fuligula) fuligula, *Less. Man. d'Orn.* ii. p. 416 (1828).

Aythya cristata, *Brehm, Isis*, 1830, p. 998 ; *id. Vög. Deut.* p. 916 (1831).

Morillon des Isles Mariannes, *Less. Tr. d'Orn.* p. 632 (1831) (Marianne Is., *Q. & G.*) * ; *Pucher. Rev. et Mag. de Zool.* 1850, p. 636 (juv. sp. incogn.) ; *Hartl. J. f. O.* 1855, p. 420 ; *Wiglesw. Aves Polyn.* p. 60 (1891).

Fulix fuligula, *Sundev.* (ubi ?) : *Lovén, Œfv. K. Vet.-Ak. Förh.* 1864, p. 315 ; *B., B., & R. Wat.-B. N. Am.* ii. p. 18 (note) (1884) ; *Gigl. Avif. Ital.* p. 316, n. 307 (1886) : *Tacz. P. Z. S.* 1888, p. 460 (Corea).

Fuligula vulgaris, *Hodgs. in Gray's Zool. Misc.* p. 86, n. 373 (1844).

Fuligula fuligula, *Licht. Nomencl. Av.* p. 102 (1854) ; *Hartert, Kat. Vogelsamml.* p. 232 (1891) ; *id. Ibis*, 1892, p. 518 ; *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881–92, p. 274 (1894).

Fuligula patagiata, *Brehm, Vogelf.* p. 381 (1855) ; *id. Naumannia*, 1855, p. 298.

Nyroca latirostris, *Bp. Compt. Rend.* xliii. p. 657, n. 146 (1856) (*ex Lesson*, Iles Mariannes).

Anas (Fuligula) fuligula, *Schrenck, Vög. Amurl.* p. 484 (1860) ; *Radde, Reis. S. O.-Sibir.* ii. p. 375 (1863).

Anas arctica, "*Leach*" (*errore*), *Degl. & Gerbe, Orn. Eur.* ii. p. 533 (*in syn.* F. cristatæ) (1867) ; *Gieb. Thes. Orn.* i. p. 352 (*in syn.* A. fuligulæ) (1872).

Platypus fuligula, *Dyb. & Parr. J. f. O.* 1868, p. 339 (Dauria).

Fulix cristata, *Swinh. P. Z. S.* 1871, p. 419 (China) ; *G. R. Gr. Hand-list*, iii. p. 86, n. 10684 (syn. emend.) (1871) ; *David, N. Arch. Mus. Bull.* vii. *Cat.* n. 453 (1871) ; *Swinh. Ibis*, 1873, p. 367 ; *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1336 (1873) ; *David & Oust. Ois. Chine*, p. 508 (1877) ; *Prjev. in Rowley's Orn. Misc.* iii. p. 106 (1878) (Mongolia) ; *Radde, Ornis Caucas.* p. 461 (1884) ; *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 305 (1891).

Œdemia (!) cristata, *Dress, Ibis*, 1876, p. 420.

Fuligula linnei, *Malm. Göteb. och Bohusl. Faun.* p. 350 (1877).

* It appears both to Dr. Oustalet and myself that the specimen from the Marianne Islands, still preserved in the Paris Museum, is a young bird, in a very bad state, of the present species.

Hybrids.

? Canard morillon ♂ (Fuligula cristata) × Sarcelle de la Caroline ♀ (Aix sponsa), *Geoffr. St.-Hil. Ann. Mus. Hist. Nat.* vii. pp. 222, 226 (1806); *Selys-L., Bull. Soc. Roy. Belg.* xxiii. 2, p. 21, n. 23 (1856); *Leverk. J. f. O.* 1890, p. 225.

Fuligula cristata × Nyroca leucophthalma, *Sclat. P. Z. S.* 1880, p. 524; *id. List Vert. An.* 8th ed. pp. 524, 525 (1883). *S.*

Fuligula cristata ♀ × Fuligula ferina ♂, *Saund. P. Z.* 1886, p. 550; *Leverk. J. f. O.* 1890, p. 225.

Fuligula cristata × Fuligula nyroca, *Leverk. l. c.*

Fuligula cristata × Fuligula marila, *Leverk. l. c.*

Fuligula cristata × Anas querquedula, *Leverk. l. c.*

Adult male. Head, neck, upper parts, and breast black; occipital feathers considerably elongated, forming a crest or tuft; sides of the head with a purple gloss; a white spot on the chin; back and scapulars with obscure traces of pale vermiculations; lower breast, belly, sides, and flanks white; vent and under tail-coverts black; wings black; speculum on the secondaries white, with a black band at the tip; under wing-coverts, except the marginal ones which are dusky, and axillaries white; primaries brown-grey, with the tips and the outer webs more or less blackish; tail black: bill pale blue, with the nail black; irides brilliant golden yellow; legs and toes dark blue, the webs black. Total length about 17 inches, wing 8, tail 2·5, culmen 1·75, tarsus 1·12.

Female. Crest smaller than in the male; upper parts and upper breast brown; the underparts dull white or pale ashy brown, and less clearly defined from the brown upper breast; flanks brown; speculum as in the male; inner secondaries glossed with green.

Young in first plumage. Closely resemble adult females, but are paler brown, especially on the chin and throat, and have no metallic green gloss on the innermost secondaries; there are many white feathers at the base of the bill.

Males in first nuptial dress have white margins to the black feathers of the breast, a shorter crest, no green or purple gloss on the head, and a small white spot on the chin.

Males in moulting plumage are intermediate in colour between males in first plumage and males in first nuptial plumage (*Seebohm*).

Young in down are dark brown, shading into nearly white on the belly (*Seebohm*).

Hab. Palæarctic Region from the Atlantic to the Pacific; in the Ethiopian Region it extends as far south as Shoa, and apparently breeds in the high lakes of Abyssinia; in winter in S. China, Japan, and India, but not in Ceylon or in Burmah; accidental in the Malay Archipelago (Philippines and Borneo), and in Polynesian Islands (Marianne Isl. and Pelew Islands).

a. ♀ ad. st.	No locality.	Old Coll.
b, c. Pull. sk.	No locality.	Gould Coll.
d, e. ♂ ad. sk.	Great Britain (*Leadenhall Market*).	Purchased.
f. ♂ imm. sk.	Orkneys.	H. J. Elwes, Esq. [P.].
g. ♀ ad. sk.	Tiree, Scotland, Jan.	Colonel Irby [P.].

h–q. ♂ ♀ ad. et pull. st.	Perthshire, Scotland, June.	C. S. H. Drummond Moray, Esq. [P.].
r. ♂ ad. sk.	Hickling, Norfolk, Jan. (*T. E. Gunn*).	Seebohm Coll.
s, t. ♂ ♀ ad. st.	Mertou, Norfolk, June.	Lord Walsingham [P.].
u. ♂ ad. sk.	Liverpool, Jan.	H. J. Elwes, Esq. [P.].
v. ♂ ad. sk.	Cambridge Market, Nov.	Salvin-Godman Coll.
w. ♂ ad. sk.	Wiltshire.	Montagu Coll.
x–a'. ♂ ♀ ad et juv. sk.	Avington, Feb., Dec. (*R. B. S. & G. E. Shelley*).	Dr. R. Bowdler Sharpe [P.].
b'. ♂ ad. sk.	Avington, Dec. (*G. E. S.*).	Shelley Coll.
c'. ♂ ad. sk.	Devonshire, Jan.	E. Reynolds, Esq. [P.].
d'. ♂ juv. sk.	Tunis.	Fraser Coll.
e'. ♀ imm. sk.	Fayoom, Egypt, March (*G. E. S.*).	Shelley Coll.
f'. ♂ imm. sk. et st.	Egypt.	J. Bowring, Esq. [P.].
g'–l'. ♂ ♀ ad. et juv. sk.	Angollalah, May (*Harris*).	India Museum [P.].
m'. ♀ ad. sk.	Mesopotamia (*Jones*).	Euphrates Exp.
n'. ♀ juv. sk.	Aden.	C. Chevalier, Esq. [P.].
o'. ♀ juv. sk.	Lenkoran, Dec.	Seebohm Coll.
p'. ♀ juv. st.	Langiorskaja, Ob, Sept.	Dr. O. Finsch [C.].
q'. Pull. sk.	Obdorsk, W. Siberia, Aug.	Dr. O. Finsch [C.].
r'. ♀ ad. sk.	Ladak (*Strachey*).	India Museum [P.].
s'. ♀ ad. sk.	Wooler Lake, Cashmere, Nov. (*G. Henderson*).	Hume Coll.
t'. ♂ ad. sk.	Kashgar (*Bellew*).	India Museum [P.].
u'. ♂ ad. sk.	Afghanistan (*Griffiths*).	India Museum [P.].
v', w'. ♂ ♀ ad. sk.	Kokeran, March.	Lt.-Col. Swinhoe [P.].
x'. ♂ ad. sk.	Kokeran, March (*Lt.-Col. Swinhoe*).	Seebohm Coll.
y'. ♂ ad. sk.	Kandahar, Feb.	Lt.-Col. Swinhoe [P.].
z'. ♂ ad. sk.	Kandahar, Feb. (*Lt.-Col. Swinhoe*).	Seebohm Coll.
a''. ♀ ad. sk.	Jubbee R. near Hassan Abdal, March (*R. W. Stoker*).	Hume Coll.
b'', c''. ♀ ad. et juv. sk.	Indus R. near Attock, Jan. (*R. W. Stoker*).	Hume Coll.
d''. ♂ ad. sk.	R. Jhelum, March.	Dr. Aitchison [P.].
e'', f''. ♂ ad. sk.	Muncha Lake, Sind, Jan.	Hume Coll.
g''. ♂ ad. sk.	Sirza.	Hume Coll.
h'', i'', k''. ♂ ad. et ♀ juv. sk.	Gurgaon, Jan., Feb., March (*W. N. Chill*).	Hume Coll.
l'', m''. ♂ ♀ imm. sk.	Delhi, Jan.	Hume Coll.
n'', o'', p''. ♂ ♀ ad. sk.	Etawah.	Hume Coll.
q'', r'', s''. ♂ ad. et ♀ imm. sk.	Oudh, Dec., Jan., Feb.	Hume Coll.
t'', u''. ♂ ad. et ♀ juv. sk.	Nepal.	B. H. Hodgson, Esq. [P.].

v'', *w''*, *x''*. ♂ ad. et ♀ imm. sk.	Native Sikhim, March, April, May (*L. Mandelli*).	Hume Coll.
y''. ♂ ad. sk.	Assam (*McClelland*).	India Museum [P.].
z'', *a*³. ♂ ♀ ad. sk.	Gwalior.	C. Maries, Esq. [P.].
*b*³. ♀ ad. sk.	Titana, Khandeish, Feb. (*J. Davidson*).	Hume Coll.
*c*³. ♂ imm. sk.	Raipur, Central Provinces.	Hume Coll.
*d*³–*l*³. ♂ ♀ ad. et imm. sk.	Lake Logtak, Manipur, Feb., March (*A. O. H.*).	Hume Coll.
*m*³. ♂ ad. sk.	Kiukiang, China, March.	F. W. Styan, Esq. [P.].
*n*³. ♀ ad. sk.	Kiukiang, March (*R. Swinhoe*).	Seebohm Coll.
*o*³, *p*³. ♂ imm. et ♀ juv. sk.	Amoy, China, Feb. (*R. Swinhoe*).	Seebohm Coll.
*q*³, *r*³. ♂ ♀ ad. sk.	Shanghai, China, March (*R. Swinhoe*).	Seebohm Coll.
*s*³. ♀ ad. sk.	Corea.	C. W. Campbell, Esq. [P.].
*t*³, *u*³. ♂ ♀ ad. sk.	Hakodadi, Japan, May, Sept. (*Blakiston*).	Seebohm Coll.
*v*³, *w*³. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
*x*³, *y*³. ♂ ad. et juv. sk.	Yezo, Japan, June.	Tweeddale Coll.
*z*³, *a*⁴, *b*⁴. ♂ ♀ imm. et juv. sk.	Laguna de Bay, Manilla (*Maitland Heriot*).	Tweeddale Coll.
*c*⁴. ♂ imm. sk.	Labuan, Nov.	A. Everett, Esq. [P.].
*d*⁴. Skeleton.	England.	
*e*⁴. Skeleton.	S. Germany.	Dr. A. Günther [P.].
*f*⁴. Skeleton (imperfect).	Nepal.	B. H. Hodgson, Esq. [P.].
*g*⁴. Skull.		
*h*⁴. Sternum.	England.	J. Ray, Esq. [P.].
*i*⁴, *k*⁴. Sterna.	England.	Purchased.

HYBRIDS.

Fuligula fuligula × *Nyroca ferina*.

*l*⁴. Juv. sk.	Trieg.	Hon. Walter Rothschild [P.].

Fuligula fuligula × *Nyroca africana*.

*m*⁴, *n*⁴. Ad. et pull. st.	Bred in confinement.	Zool. Soc.

4. Fuligula novæ zealandiæ.

New Zealand Duck, *Lath. Syn.* iii. 2, p. 543, n. 80 (1785).

Anas novæ seelandiæ, *Gm. S. N.* i. 2, p. 542, n. 117 (1788) (*ex Latham*); *Dum. Dict. Sc. Nat.* vi. p. 387 (1817).

Anas novæ zealandiæ, *Lath. Ind. Orn.* ii. p. 870, n. 92 (1790); *Bonn. Enc. Méth.* i. p. 133 (1790); *Licht. in Forst. Descr. An.* p. 95 (note) (1844); *Gieb. Thes. Orn.* i. p. 358 (1872).

Fuligula novæ zealandiæ, *Steph. Gen. Zool.* xii. 2, p. 210 (1824); *G. R. Gr. in Dieff. Trav.* ii. App. p. 198 (1843); *id. List B. Brit.*

Mus. p. 142 (1844); *id. Gen. B.* iii. p. 621, n. 5 (1844); *id. Voy. Ereb. & Terr., Birds.* p. 16, pl. 18 (1846); *Rehnb. Syn. Av.*, Natatores, t. 77. f. 890 (18—) (*ex Ereb. & Terror*); *G. R. Gr. Ibis*, 1862, p. 242; *Hector, New Zeal. Exhib.* p. 277 (Otago) (1860); *Schleg. Mus. P.-B.*, Anseres, p. 29 (1866); *Potts, Trans. N. Z. Inst.* ii. 1869, p. 73 (1870); *Hutton, Ibis*, 1870, p. 395 (Auckland); *Finsch, J. f. O.* 1870, p. 358; *Hutton, Cat. B. New Zeal.* p. 38 (1871); *Travers, Trans. N. Z. Inst.* iv. 1871, p. 208 (1872); *Finsch, J. f. O.* 1872, p. 188; *Buller, Hist. B. New Zeal.* p. 259, pl. 27. f. 2 (1873); *Finsch, J. f. O.* 1874, p. 203; *Sharpe, Voy. Ereb. & Terr., Birds*, p. 31 (1875); *Sclat. P. Z. S.* 1880, p. 527; *Finsch, Ibis*, 1882, pp. 392, 397; *Buller, Man. B. New Zeal.* p. 72 (1882); *id. Hist. B. New Zeal.* 2nd ed. ii. p. 274, pl. xlv. (lower fig.) (1888); *Smith, Trans. N. Z. Inst.* xxi. 1888, p. 221 (Lake Brunner) (1889); *Tristr. Cat. Coll. B.* p. 48 (1889); *Forbes, Ibis*, 1893, p. 545 (Chatham Isl.).

Anas atricilla, *Forst. Icon. ined.* t. 79; *id. Descr. An.* (*ed. Licht.*) p. 95 (1844).

Marila novæ zelandiæ, *Bp. Compt. Rend.* xliii. p. 651, n. 137 (1856).

? Anas atra, *Ellman, Zoolog.* 1861, p. 7471.

Fulix novæ seelandiæ, *G. R. Gr. Hand-list*, iii. p. 86, n. 10688 (1871).

Adult male. Head and neck black, glossed with purple above, with green on the sides; chin white; upper parts and breast black, the former more or less glossed with green, upper back and scapulars minutely dusted with white; breast freckled with white on the lower portion; abdomen brown, the edges of the feathers paler or dull whitish; sides of the vent and under tail-coverts black; sides and long feathers overlapping the thighs brown with a chestnut tinge; wings glossy black; secondaries with a narrow white speculum, broadly edged with black, each feather has the outer edge of the outer web narrowly edged with black; primaries grey, with the tips and also the outer webs of the first three or four black; marginal under wing-coverts dark brown, the inner ones and axillaries white; tail dark brown: "irides bright yellow; bill ash-blue, tipped with black; legs and toes grey, membranes black, bordered near each toe with grey" (*Hutton*). Total length about 17 inches, wing 8, tail 2·7, culmen 1·65, tarsus 1·25.

Female. "A broad band surrounding the base of the upper mandible white; head, neck, breast, and sides of the body blackish brown, changing to castaneous on the lower part of the breast and flanks, on the abdomen lighter brown, mottled with fulvous white, darker brown in the ventral region; under tail-coverts blackish brown, largely marked with white; shoulders dark brown, margined with castaneous; back and upper surface of wings blackish brown, glossed with green; speculum as in the male; tail dark brown." (*Buller.*)

There is no specimen in the British Museum which would answer to the above description, but one supposed to be a female is as follows:—Head, neck, upper parts, and wings brown; breast and sides dull chestnut-brown; abdomen and under tail-coverts whitish,

the pale brown bases of the feathers more or less showing through the white tips; speculum as in the male, but of a duller white; tertials brown with a green gloss; tail brown.

Also in the Rothschild Museum there is no female with a broad white band surrounding the base of the upper mandible, but one has a slight indication of it.

Young in down. "Has the down thickset; the upper parts pale dove-brown, the underparts white; a dusky collar round the neck; an obscure white spot on each wing, and a smaller one on each side of the rump; the hair-like filaments on the upper parts rather long, very fine in texture, and perfectly black; irides dark brown; bill reddish brown, the under mandible yellow, with a brownish tip; feet light brown." (*Buller.*)

Sir W. Buller notices a smaller form, from Lake Ellesmere, having a more chestnut hue.

Hab. New Zealand, with the Auckland and Chatham Islands.

a, b. ♂ ad. sk. et ♀ juv. st.	New Zealand.	Capt. Stokes [P.].
c, d. ♂ ad. sk.	New Zealand.	Sir E. Home [P.].
e. ♂ ad. sk.	New Zealand.	Antarctic Exped. [C.].
f, g. ♂ ♀ ad. st.	Bay of Islands.	Antarctic Exped. [C.].

5. Fuligula collaris.

Anas collaris, *Donov. Brit. B.* vi. pl. 147 (England) (1809); *Gieb. Thes. Orn.* i. p. 348 (1872) (syn. emend.).

Anas fuligula, *Wils.* (*nec Linn.*) *Am. Orn.* viii. p. 66, pl. 67. f. 5 (1814); *Temm. Man. d'Orn.* 2nd ed. ii. p. 873 (part.) (1820).

Anas (Fuligula) rufitorques, *Bp. Journ. Philad. Acad.* iii. p. 381 (1824); *Gundl. J. f. O.* 1871, p. 283 (Cuba).

Anas rufitorques, *Ord, ed. Wils.* viii. p. 61 (1825); *Bp. Specch. Comp.* p. 73 (1827); *Less. Compl. de Buff., Ois.* ix. p. 536 (1837); *id. op. cit.* 2nd ed. p. 722 (1838); *Schleg. Rev. Crit.* p. cxix (1844); *Mart. J. f. O.* 1859, p. 221 (Bermuda).

Fuligula rufitorques. *Bp. Ann. Lyc. N. Y.* ii. p. 393 (1826); *id. Syn.* p. 393 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 454 (1831); *Nutt. Man.* ii. p. 439 (1834); *Aud. Orn. Biogr.* iii. p. 259, pl. 234 (1835); *Eyt. Mon. Anat.* p. 158 (1838); *Bp. Comp. List,* p. 58 (1838); *Aud. Syn.* p. 287 (1839); *id. B Am.* vi. p. 320, pl. 398 (1843); *Giraud, B. Long Isl.* p. 324 (1844); *DeKay, N. Y. Zool.* p. 325 (1844); *Gosse, B. Jam.* p. 408 (1847); *Selys, Mém. Soc. Roy. Sci. Liége,* iv. p. 41 (1848–49); *Rchnb. Syn. Av.,* Natatores, t. 80. ff. 2754–55 (1850) (*ex Audubon*); *Lemb. Av. Cub.* p. 117 (1850); *Bp. Rev. Crit. Orn. Eur.* p. 107 (1850); *Licht. Nomencl. Av.* p. 102 (Mexico) (1854); *Brehm, Naumannia,* 1855, p. 298; *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 343 (1858); *Wedd. & Hurdis, Natur. in Berm.* p. 50 (1859); *Wied, J. f. O.* 1859, p. 176; *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (1860); *Sclat. P. Z. S.* 1862, p. 20 (Oaxaca); *Albrecht, J. f. O.* 1862, p. 207 (Jamaica).

Fuligula collaris, *Bp. Cat. Met. Ucc. Eur.* p. 73, n. 454 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 142 (1844); *id. Gen. B.* iii.

p. 621, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 76. f. 886 (1845) (*ex Donovan?*); *Brehm, Naumannia*, 1855, p. 298; *Cab. & Gundl. J. f. O.* 1857, p. 230 (Cuba); *Salv. & Sclat. Ibis*, 1860, p. 277 (Guatemala); *Gundl. J. f. O.* 1861, p. 346; *Blas. List B. Eur.* p. 21 (1862); *G. R. Gr. List Brit. B.* p. 199 (1863); *Schleg. Mus. P.-B.*, Anseres, p. 26 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 535 (1867); *Turnb. B. E. Pa.* p. 46 (1869); *Coues, Key N. Am. B.* p. 289 (1872); *id. Check-list N. Am. B.* n. 502 (1873); *id. Birds N.-West*, p. 574 (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 400; *Gurn. Zoologist*, 1877, p. 341; *Sclat. P. Z. S.* 1880, p. 525; *Cory, B. Bahamas*, p. 188 (1880); *Salv. Cat. B. Strickl. Coll.* p. 537 (1882); *Coues, Check-list N. Am. B.* 2nd ed. p. 114, n. 722 (1882); *B. O. U. List Brit. B.* p. 129 (1883); *Cory, List B. W. Ind.* p. 31 (1885); *Seeb. Hist. Brit. B.* iii. pp. 584, 610 (1885); *Tristr. Cat. Coll. B.* p. 48 (1889).

? Fuligula cristata, *Denny* (*nec Leach*), *P. Z. S.* 1847, p. 40.

Marila collaris, *Bp. Compt. Rend.* xliii. p. 651, n. 134 (1856).

Fulix collaris, *Baird, B. N. Am.* p. 792 (1858); *id. Cat. N. Am. B.* n. 590 (1859); *id. Mex. Bound. Surv., Birds*, p. 27 (1859); *Bryant, Pr. Bost. Soc. N. H.* vii. p. 122 (Bahamas) (1859); *Ross, Canad. Natur.*, April 1862; *Verrill, Pr. Ess. Inst.* iii. p. 153 (1862); *Blakist. Ibis*, 1863, p. 148 (Brit. N. Am.); *March, Pr. Philad. Acad.* 1864, p. 72 (Jamaica); *Dress. Ibis*, 1866, p. 43 (Texas); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 390 (1866); *Brown, Ibis*, 1868, p. 426 (Vancouver); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466; *G. R. Gr. Hand-list*, iii. p. 86, n. 10685 (1871); *Aiken, Pr. Bost. Soc. N. H.* xv. p. 210 (Colorado) (1872); *Trippe, ibid.* p. 241 (Iowa) (1872); *Snow, B. Kans.* p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1872); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mazatlan) (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 383 (Cuba), 1878, p. 190 (Porto Rico); *id. An. Soc. Esp. Hist. Nat.* vii. p. 406 (Porto Rico) (1878); *Ridgw. Nom. N. Am. B.* n. 616 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 25 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 701 (1884); *Frenz. J. f. O.* 1885, p. 147 (Illinois); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 306 (1891).

Fuligula affinis, *Sclat.* (*nec Eyt.*) *P. Z. S.* 1859, p. 365 (Jalapa, *De Oca*).

Nyroca collaris, *A. & E. Newt. Handb. Jam.* p. 113 (1881).

Aythya collaris, *Ridgw. Pr. U.S. Nat. Mus.* viii. p. 356 (1885); *A. O. U. Check-list N. Am. B.* p. 119, n. 150 (1886); *Turner, Contr. N. H. Alaska*, p. 133 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 72 (1887); *Sennett, Auk*, 1887, p. 24 (downy stage); *Ridgw. Man. N. Am. B.* pp. 103, 104 (1887); *Cory, Auk*, 1888, p. 67 (W. Ind.); *id. B. W. Ind.* p. 267 (1889); *Hatch, B. of Minnes.* p. 62 (1892).

Hybrid.

Fuligula collaris × F. americana, *A. Newt. P. Z. S.* 1860, pl. clxvii.; *Leverk. J. f. O.* 1890, p. 224.

Adult male. Head, neck, upper breast, and upper parts black, the head and neck glossed with purple; a white spot on the chin: round the lower neck a chestnut collar; lower breast and abdomen

white, sharply defined from the black upper breast, and gradually changing into the black of the sides of the vent and under tail-coverts, through a graduated barring of white and dusky; sides delicately undulated with greyish dusky; upper wing-coverts dusky grey, wing-speculum on the secondaries grey, darker subterminally, and very narrowly tipped with white; tertials black with a green gloss; primaries dusky grey, the outer quills on the outer webs and the others at the tips blackish; under wing-coverts pale grey, more or less edged with white, axillaries white; tail dusky black: "bill lead-colour, with a narrow basal and broad subterminal band of bluish white, the end black; iris bright yellow; legs and feet pale slaty" (*B., B., & R.*). Total length 17 inches, wing 7·8, tail 2, culmen 1·88, tarsus 1·2.

Female. Crown and nape dull dark brown, becoming gradually light below, rest of head paler and greyer, the anterior half of the lores, the chin, and throat white; jugulum, sides, and flanks raw umber-brown; breast and abdomen white; anal region dull brown, longer under tail-coverts whitish; wings as in the male; remaining upper parts dull dark brown, the feathers of the back and the scapulars with pale olive-brown edges; bands on the bill narrower and less distinct than in the male; iris yellow; feet slaty.

Young in down. "Above greyish umber-brown, relieved by seven spots of light buff as follows:—a small and inconspicuous spot in the middle of the back, (!) between, and a little anterior to, the wings; a large patch on each side of the back, another on each side of the rump, at the base of the tail, and a bar across the posterior border of each wing; crown, occiput, and nape crossed longitudinally by a white stripe of deep greyish umber; a roundish isolated spot of light greyish brown, including the forehead, and lower parts generally, light dingy buff, the flanks crossed by a brown transverse stripe from the rump to the tibia; *side of the head without any longitudinal stripes.*" (*B., B., & R.*)

Hab. The whole of North America, south to Guatemala and the West Indies; breeding chiefly in the high north. Its occasional occurrence in Europe is doubtful.

a. ♂ imm. sk.	Vancouver I.	J. K. Lord, Esq. [P.].
b. ♂ ad. st.	N. America.	Earl of Derby [P.].
c. ♂ ad. sk.	N. America.	Salvin-Godman Coll.
d. ♂ ad. st.	N. Land Expedition.	Sir G. Back [P.].
e, f, g. ♂ ad. et juv. sk.	W. side Rocky Mts.	J. K. Lord, Esq. [P.].
h. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
i. Juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
k. ♂ ad. sk.	49th Parallel.	Salvin-Godman Coll.
l, m. ♀ ad. et ♂ imm. st.	Rockport, Ohio.	Prof. Kirtland [P.].
n, o. ♂ ♀ ad. sk.	Chicago, Illinois (*Nelson & Jencks*).	Salvin-Godman Coll.

p. ♂ ad. sk.	Long Island Sound, New York (*J. H. Batty*).	Salvin-Godman Coll.
q, r. ♂ ad. sk.	Brownsville, Texas, Feb., March (*F. B. Armstrong*).	Salvin-Godman Coll.
s, t. ♂ ad. et ♀ imm. sk.	Corpus Christi, Texas, Oct., Nov. (*F. B. A.*).	Salvin-Godman Coll.
u. ♀ ad. sk.	Dueñas, Guatemala (*O. S.*).	Salvin-Godman Coll.
v. ♀ ad. sk.	Coban, Vera Paz, Nov. (*O.S.*).	Salvin-Godman Coll.

46. TACHYERES.

	Type.
Micropterus (subgen.), *Less. Man. d'Orn.* p. 416 (1828) (*nec Lacép.* 1802)	T. cinereus.
Micropterus, *King, P. Z. S.* 1830, p. 15 (*nec Lacép.* 1802).	
Tachyeres, *Owen, Trans. Zool. Soc.* ix. p. 254 (1875) ..	T. cinereus.

Range. Confined to Straits of Magellan and Falklands.

1. Tachyeres cinereus.

Oiseau grise, ou Oie de plein, *Pernety, Voy.* ii. c. 19, p. 21 (1769) (Falklands).

Race-horse Duck, *Pernety, Journ.* pp. 213, 214 (1771); *Buff. Hist. Nat. Ois.* ix. p. 414 (1783).

Loggerhead, *Clayton, Phil. Trans.* lxvi. p. 104 (1776); *Penrose, Falkl. Isl.* p. 35; *Forster, Voy.* ii. p. 493 (1777).

Loggerhead Goose, *Lath. Syn.* iii. 2, p. 439, n. 4 (1785).

Anas cinerea, *Gm. S. N.* i. 2, p. 506, n. 60 (1788) (*ex Pernety*; Falklands); *Brehm, Vög. Deutschl.* p. 903 (note) (1891); *Merrem in Ersch u. Grub. Encycl.* i. sect. vol. xxxv. pp. 29, 30 (1841); *Gieb. Thes. Orn.* i. p. 347 (1872).

Anas brachyptera, *Lath. Ind. Orn.* ii. p. 834, n. 5 (1790); *Quoy & Gaim. Voy. Uran., Zool.* p. 139, pl. 39 (1824).

Anser cinereus, *Bonn. Enc. Méth.* i. p. 112 (1790).

Anser brachypterus, *Vieill. N. D.* xxiii. p. 344 (1818); *Dum. Dict. Sc. Nat.* xxxv. p. 470 (1825).

Anas (Micropterus) brachyptera, *Less. Man. d'Orn.* ii. p. 416 (1828); *id. Tr. d'Orn.* p. 630, n. 28 (1831); *id. Compl. de Buff.* 2nd ed. p. 720 (1838).

Oidemia patachonica, *King, Zool. Journ.* iv. p. 100 (1828); *Strickl. Ann. & Mag. N. H.* vii. p. 39 (1841); *Gibson, Pr. Phys. Soc. Edinb.* iv. pp. 185, 186 (1878).

Micropterus patachonicus, *King, P. Z. S.* 1830, p. 15 (W. part of Magellan Strait); *Less. Compl. de Buff., Ois.* ix. p. 533 (1837); *Eyt. Mon. Anat.* p. 143, pl. 2. f. 4 (trachea) (1838); *Sclat. P. Z. S.* 1861, p. 46 (Falklands); *Abbott, Ibis*, 1861, p. 161 (Falklands); *Eyt. Syn. Anat.* p. 100 (1869); *Cunningh. Notes on Nat. Hist. Str. of Magell.* pp. 95, 475 (1871); *Gigl. Viagg. Magenta*, pp. 934, 942 (1876); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 229, pl. v. (1891).

Micropterus brachypterus, *King, l. c.*; *Less. Compl. de Buff. Ois.* ix.

p. 533 (1837); *id. op. cit.* 2nd ed. p. 720 (1838); *Eyt. Mon. Anat.* p. 144 (1838); *Darw. Voy. Beagle*, iii. *Birds*, p. 156 (1841); *Licht. Nomencl. Av.* p. 100 (1854); *Eyt. Syn. Anat.* p. 101 (1869).

Steamer-Duck, *P. P. King, Voy. 'Adventure,'* i. p. 35 (1839); *cf. A. Newt. Dict. of B.* p. 518.

Micropterus cinereus, *G. R. Gr. List Gen. B.* p. 74 (1840); *id. op. cit.* 2nd ed. p. 95 (1841); *id. List B. Brit. Mus.* iii. p. 140 (1844); *id. Gen. B.* iii. p. 623 (1844); *Rchnb. Syn. Av.*, Natatores, t. 77. f. 894 (1845); *Hartl. Erst. Nachtr. Verz. Vögels*, p. 19, n. 222 (1846); *Des Murs in Gay, Hist. de Chile, Zool.* i. p. 457 (1847); *Rchnb. Av. Syst. Nat.* p. viii, tab. vii. (1852); *Bp. Compt. Rend.* xliii. p. 651, n. 151 (1856); *Gould, P. Z. S.* 1859, p. 96 (egg, Falklands); *Sclat. P. Z. S.* 1860, p. 389 (Falklands); *Abbott, Ibis*, 1861, p. 161 (Falklands); *Sclat. P. Z. S.* 1861, p. 367 (Zool. Gard.); *Pelz. Reise Novara, Vög.* p. 139 (Chiloe) (1865); *Sclat. P. Z. S.* 1867, pp. 335, 340; *Phil. & Landb. Cat. Av. Chil.* p. 43 (1868); *Cunningham, Ibis*, 1868, p. 127; *Sclat. & Salv. ibid.* p. 189 (Sandy Point); *Gigl. ibid.* p. 498; *Sclat. & Salv. Ibis*, 1870, p. 499 (Gallegos River, Str. of Magellan); *Cunningh. Notes on Nat. Hist. of the Str. of Magell. etc.* p. 94 (1871); *id. P. Z. S.* 1871, p. 262; *id. Tr. Zool. Soc.* vii. pp. 493–501, pls. 58–62 (anatomy) (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Gigl. Viagg. Magenta*, pp. 933, 934, 935, 937, 939, 941, 946, 963 (1876); *Oust. Miss. Sc. Cap Horn*, vi. *Ois.* p. 212, pl. iv. (1891).

Anas pteneros, *Forst. Icon. ined.* t. 68; *id. Descr. An.* p. 338 (1844) (Magellan).

Fuligula cinerea, *Schleg. Dierent.* p. 274, with fig. (1864); *id. Mus P.-B.*, Anseres, p. 13 (1866).

Camptolaimus (——) cinereus, *G. R. Gr. Hand-list*, iii. p. 88, no. 10704 (1871).

Tachyeres brachypterus, *Owen, Trans. Zool. Soc.* ix. p. 254 (1875).

Tachyeres cinereus, *Sclat. & Salv. P. Z. S.* 1876, p. 402, 1878, p. 437 (Messier Channel, Tom Harbour, Port Churrucha, Falkland Islands); *Sclat. P. Z. S.* 1879, p. 310 (egg), 1880, p. 529; *Sharpe, P. Z. S.* 1881, p. 13; *Sclat. & Salv. Zool. Voy. Chall., Birds*, pp. 107, 150 (1881); *Sclat. P. Z. S.* 1882, p. 792 (Zool. Gard.); *Rchnw. Orn. Centralbl.* 1882, p. 17; *id. Vög. zool. Gärt.* p. 48 (1882); *Sclat. List Vert. An.* 8th ed. p. 442 (1883); *Stejn. Kingsl. Stand. Nat. Hist.* iv. p. 149 (1885); *MacFarl. Ibis*, 1887, p. 202; *Tristr. Cat. Coll. B.* p. 47 (1889); *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 309 (1891); *B. James, New List Chil. B.* p. 10, n. 164 (1892); *A. Newt. Dict. of B.* p. 518 (pt. 2, 1893).

Micropterus macropterus, *Gigl. Viagg. Magenta*, p. 934 (1876).

Adult male. Head and neck pale grey; a reddish patch on throat; entire upper parts, breast, sides, and flanks dark grey, each feather, especially on the back, breast, and sides, with a darker subapical band: abdomen and under tail-coverts white; wing-coverts uniform grey; secondaries white; primaries brown-grey; under wing-coverts white, but the marginal ones grey; tail brown-grey, the ventral feathers curled upwards: "bill orange-yellow, nail black; alar tubercles orange-yellow; tarsus and feet orange-

yellow, webs mixed with black; irides brown" (*Giglioli*). Total length about 30 inches, wing 11, tail 5·5, culmen 2·5, tarsus 2·4.

Female. Similar to the male, but somewhat smaller.

Young in down. Head, neck, breast, upper parts, sides, and flanks dusky grey; abdomen and under tail-coverts white; two white spots on the sides of the head, one behind the eye on the temporal region, and another lower down behind the ear-coverts (*Mus. Turin*).

I have not been able to satisfy myself that there are more than one species of Steamer Ducks.

Hab. Falklands, Magellan Straits, and Chili as far north as Valdivia *.

a. Ad. st.	Straits of Magellan.	The Admiralty [P.].
b. ♂ ad. sk.	Straits of Magellan, Jan.	'Challenger' Exp.
c. ♀ juv. sk.	Messier Channel.	'Challenger' Exp.
d, *e*. ? ♀ ad. et pull. sk.	Tom Harbour, Messier Channel, Jan.	'Challenger' Exp.
f. ♂ pull. sk.	Tom Bay, W. coast of Patagonia.	Dr. Coppinger [C.].
g. ♀ ad. sk.	Port Churucha, Str. of Magellan, Jan.	'Challenger' Exp.
h. ♀ ad. sk.	Puerto Bueno, Str. of Magellan, Jan.	Dr. Coppinger [C.].
i. Juv. sk.	Elizabeth Island, Str. of Magellan, Jan.	Dr. Coppinger [C.].
k. ♂ ad. sk.	Walney Sound, Str. of Magellan, Feb.	Dr. Coppinger [C].
l. Ad. st.	E. Falkland Island.	J. Macgillivray, Esq. [P.].
m. Ad. sk.	Falkland Islands [*Eyton Coll.*].	Salvin-Godman Coll.
n. Ad. sk.	Falkland Islands.	Tweeddale Coll.
o. ♂ juv. sk.	Falkland Islands.	'Challenger' Exp.
p, *q*. Ad. st. et sk.	S. Salvador Bay, Falkland I., Aug. (*Antarctic Exp.*).	The Admiralty [P.].
r. ♀ ad. sk.	Uranie Bay, Falkland I., Nov. (*R. McC.*).	McCormick Bequest.
s. Skeleton.	Falkland Islands.	E. A. Holmstead, Esq. [P.].
t. Skeleton.	Str. of Magellan.	Dr. Coppinger [C.].
u. Skeleton.	W. of Cape Froward (*W. D. Wodsworth*).	Voy. of H.M.S. 'Sylvia.'
v. Skeleton.		Zool. Soc.
w. Skeleton.		
x. Skull.	Cockle Cove.	Dr. Coppinger [C.].
y. Sternum.	Str. of Magellan.	Dr. Coppinger [C.].

* According to G. E. Cox (Anales de la Universidad de Chile, 1863, Viage a la Patagonia septentrional), the Andean Lakes Nahuelhuapi, Todos Los Santos, and others are covered with flying *Micropteri*.

47. CLANGULA.

	Type.
Clangula, *Leach* in Ross's Voy. Discov.* App. p. xlviii (1819) (*ex Gesner*); *Flem. Philos. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 564	C. glaucion.
Glaucion, *Kaup, Natürl. Syst.* p. 53 (1829) (*nec Oken*, 1816)	C. glaucion.
Bucephala, *Baird, B. of N. Am.* p. 796 (1859) (*nec* Bucephalus, *Baer*, 1827, *neque Smith*, 1829)	C. albeola.
Glaucionetta, *Stejn. Pr. U.S. Nat. Mus.* viii. p. 409 (1885).	C. glaucion.
Charitonetta, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 163 (1885)	C. albeola.

Range. Northern Hemisphere.

Key to the Species.

a. Nostrils nearer to the tip than to the base of the bill.

a'. Head and upper neck glossy greenish black, with a large roundish or oval spot of white on lower part of lores (*male*); head of the *female* deep hair-brown; greater wing-coverts usually without distinct blackish tips ..... *glaucion*, p. 376.

b'. Head and upper neck glossy blue-black, with a large vertical triangular patch of white across lores (*male*); female similar to that of the preceding species, but somewhat larger and with the grey chest-band broader; greater wing-coverts, usually, not always, tipped with blackish ..... *islandica*, p. 383.

b. Nostrils nearer to the base of the bill than to the tip; *male*: head and upper neck rich silky dark metallic green, bronze, and violet-purple, with a large patch of pure white extending from behind the eye to and across the occiput; *female*: head, neck, and upper parts generally dusky greyish brown; a spot on ear-coverts white..... *albeola*, p. 385.

1. Clangula glaucion.

The Golden Eye.

Clangula, *Briss. Orn.* vi. p. 416 (part.) (1760).

Anas clangula, *Linn. S. N.* i. p. 201, n. 23 (1766); *Scop. Ann.* I. *Hist. Nat.* n. 71 (1769); *Gerini, Stor. degli Ucc.* v. tav. 583 (1776); *Gm. S. N.* i. 2, p. 523, n. 23 (part.) (1788); *Lath. Ind. Orn.* ii. p. 867, n. 87 (1790); *Bonn. Enc. Méth.* i. p. 138, pl. 38. f. 4 (1790); *Lath. Tr. Linn. Soc.* iv. p. 118, tab. xv. f. 1, 2 (trachea) (1798); *Ill. Prodr.* p. 276 (1811); *Pall. Zoogr. Rosso-As.* ii. p. 271 (1811); *Temm. Man.* p. 560 (1815); *Leach, Cat.* p. 37 (1816); *Vieill. N. D.* v. p. 117 (1816); *Dum. Dict. Sc. Nat.*

* Although Leach (*l. c.*) mentions *Clangula glacialis* only, the type of the genus is obviously *Anas clangula*, Linn. In fact Leach has *Clangula*, from Gesner's *Clangula*, French "Garrot," which is *A. clangula*, Linn.

vi. p. 372 (1817); *Temm. Man.* 2nd ed. ii. p. 870 (1820); *Licht. Verz. Doubl.* p. 85 (1823); *Ménétr. Cat. Rais. Cauc.* p. 58 (Bakou) (1832); *Temm. Man.* 2nd ed. iv. p. 550 (1840); *Naum. Vög. Deutschl.* xii. p. 162, pl. 316 (1844); *Schleg. Rev. Crit.* p. 118 (1844); *Temm. & Schleg. Faun. Jap., Aves*, p. 128 (1850); *Middend. Sibir. Reis.* ii. 2, p. 287 (1853); *Brehm, J. f. O.* 1854, p. 84 (Egypt); *Wiese, J. f. O.* 1855, p. 508 (Pomerania); *Bucry, J. f. O.* 1857, p. 123 (Algeria); *Kittl. Denkw.* ii. pp. 248, 278 (1858); *Altum, J. f. O.* 1861, p. 74; *Swinh. Ibis*, 1863, p. 324; *Schleg. Mus. P.-B.*, Anseres, p. 20 (1866); *Droste, Vogelw. Borkum*, p. 300 (1869); *Homey. J. f. O.* 1870, p. 433; *Meves, Œfv. K. Vet.-Akad. Förh.* 1871, p. 182; *Gieb. Thes. Orn.* i. p. 349 (part.) (1872).

Anas glaucion, *Linn. S. N.* i. p. 201, n. 26 (♀) (1766); *Scop. Ann. I. Hist. Nat.* n. 72 (1769); *Gm. S. N.* i. 2, p. 525, n. 26 (1788); *Lath. Ind. Orn.* ii. p. 868, n. 88 (1790); *Vieill. N. D.* v. p. 118 (1816); *Dum. Dict. Sc. Nat.* vi. p. 375 (1817); *Less. Deser. Mamm. et Ois.* p. 248 (1847).

Anas peregrina, *S. G. Gmel. Reis. d. Russl.* ii. p. 183, pl. 16 (1774).

Anas marila, *Pall. (nec Linn.) Reise* ii. p. 25 (1773).

Garrot, *D'Aubent. Pl. Enl.* 802 (♂); *Buff. Hist. Nat. Ois.* ix. p. 222 (1783).

Golden-eye, *Penn. Brit. Zool.* ii. n. 276 (1785); *Lath. Syn.* iii. 2, p. 535, n. 76 (1785).

Anas melanocephala, *Herm. (nec Gm.) Obs. Zool.* p. 145 (1804).

Anas hyemalis, *Pall. (nec Linn.) Zoogr. Rosso-As.* ii. p. 270 (1811).

Clangula clangula, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 564; *Licht. Nomencl. Av.* p. 102 (1854); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 163 (Bering I.) (1885).

Clangula chrysophthalmus, *Steph. Gen. Zool.* xii. 2, p. 182, pl. 56 (1824); *Jen. Man.* p. 246 (1835); *Eyt. Cat. Brit. B.* p. 59 (1836); *Macgill. Man. Orn.* ii. p. 183 (1842).

Platypus glaucion, *Brehm, Lehrb. Eur. Vög.* p. 837 (1824).

Fuligula clangula, *Bp. Ann. Lyc. N. Y.* ii. p. 393 (1826); *id. Syn.* p. 393 (1828); *Less. Tr. d'Orn.* p. 631 (1831); *Savi, Orn. Tosc.* iii. p. 133 (1831); *Bp. Isis*, 1832, p. 1189 (part.); *Wallengr. Naumannia*, 1854, p. 276; *Degl. Orn. Eur.* ii. p. 443 (1849); *Brandt in Hofmann, Die Nordl. Ural*, ii. p. 71 (Wischera) (1856); *Wied, J. f. O.* 1859, p. 178 (part.); *Sclat. P. Z. S.* 1865, p. 618 (Hakodadi); *Schleg. Mus. P.-B.*, Anseres, p. 20 (part.) (1866); *Przew. Voy.* n. 207 (1867); *Smith, Ibis*, 1868, p. 457; *Przew. Putesch. Ussur.* n. 207 (1870); *Goeb. J. f. O.* 1871, p. 149; *Palmén, J. f. O.* 1876, p. 58 (Finland); *Seeb. & H.-Brown, Ibis*, 1876, p. 445 (Petchora); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 152 (W. Siberia); *Brandt, J. f. O.* 1880, p. 249 (St. Petersburg); *Seeb. Hist. Brit. B.* iii. p. 590, pl. 63 (egg) (1885); *Lilford, Col. Fig. Brit. B* pt. xi. (1889); *Seeb. B. Jap. Emp.* p. 253 (1890); *Rchnw. J. f. O.* 1890, p. 83; *Hartert, Kat. Vogelsamml.* p. 232 (1891).

Clangula vulgaris, *Flem. Brit. An.* p. 120 (1828); *Gould, P. Z. S.* 1834, p. 134 (Trebizond); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.* v. pl. 379 (1837); *Sw. Class. B.* ii. p. 369 (1837); *Eyt. Mon. Anat.* p. 166, pl. iii. f. 4 (sternum), pl. 12. f. 4 (cæca), pl. 15. f. 2 (trachea) (1838); *Abbott, P. Z. S.* 1834, p. 134 (Trebizond); *Blakist. Ibis*, 1863, p. 148; *Garrod, P. Z. S.* 1878, p. 429 (trachea).

Glaucion clangula, *Kaup, Natürl. Syst.* p. 53 (1829); *K. & B. Wir-*

belth. Eur. pp. lxxxvi, 229 (1840); *Nordm. J. f. O.* 1864, p. 378 (Finland and Lapland); *Saund. Ibis*, 1871, p. 397 (Spain); *Tacz. J. f. O.* 1873, p. 110, 1874, p. 337 (E. Siberia); *Swinh. Ibis*, 1874, p. 424 (Chefoo); *Severtz. J. f. O.* 1875, p. 185; *Tacz. Orn. Faun. Yost. Sibir.* p. 71 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 47 (1877), viii. p. 344 (Kamtschatka) (1883); *Radde, Ornis Caucas.* p. 462 (1884).

Clangula peregrina, *Brehm, Isis*, 1830, p. 999, n. 2; *id. Vög. Deutschl.* p. 929 (1831).

Clangula glaucion, *Brehm, Isis*, 1830, p. 999, n. 3; *id. Vög. Deutschl.* p. 929 (1831); *Bp. Comp. List*, p. 58, n. 427 (1838); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 144 (1844); *id. Gen. B.* iii. p. 622, n. 1 (1844); *Rchnb. Syn. Av.*, Natatores, t. 74. ff. 96–98 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 307 (1849); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Bolle, J. f. O.* 1855, p. 375 (Spain): *Bp. Compt. Rend.* xliii. p. 651, n. 146 (1856); *Loche, Cat. M. et O. Algér.* p. 145 (1858); *Homey. J. f. O.* 1859, p. 373; *Powys, Ibis*, 1860, p. 354 (Ionian I.); *Swinh. Ibis*, 1861, p. 345 (China), 1863, p. 434 (Formosa); *More, Ibis*, 1865, p. 447 (Great Britain); *Blyth, Ibis*, 1867, p. 176 (Indus); *Whitely, Ibis*, 1867, p. 208 (Hakodadi); *Degl. & Gerb. Orn. Eur.* ii. p. 542 (1867); *Dyb. & Parr. J. f. O.* 1868, p. 339 (Dauria); *Müll. & Droste, J. f. O.* 1869, p. 347 (Faroe); *Gould, B. of Great Brit.* v. pl. 31 (1869); *Elw. & Buckl. Ibis*, 1870, p. 340 (Turkey); *Fritsch, J. f. O.* 1872, p. 371 (Bohemia); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Dress. B. of Eur.* vi. p. 595, pl. 440 (1875); *id. Ibis*, 1876, p. 421 (Turkestan); *Blanf. East. Pers.* ii. p. 302 (1876); *Hume, Str. Feath.* iv. p. 225 (Oudh) (1876); *Brüggem. Zool. Gart.* 1876, p. 366; *B., Bl., R., & S., J. f. O.* 1877, p. 338; *Blakist. & Pryer, Ibis*, 1878, p. 215; *Pleske, J. f. O.* 1878, p. 93 (E. Russia); *Seeb. Ibis*, 1879, p. 23 (Japan); *Hume, Str. Feath.* vii. pp. 441, 464, 505 (1879); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 186 (1880); *Sclat. P. Z. S.* 1880, p. 527 (part.); *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 99 (1882); *B. O. U. List Brit. B.* p. 137 (1883); *Sclat. List Vert. An.* 8th ed. p. 441 (1883); *Newt. Enc. Brit.* 9th ed. x. p. 758 (1884); *Saund. Yarrell's Brit. B.* iv. p. 435 (1884–85); *and Man. Brit. B.* pp. 439, 735; *Chapm. Ibis*, 1885, p. 171 (Lapland); *Menzb. Ibis*, 1885, p. 358 (Upper Tarim); *Dedit. J. f. O.* 1885, p. 206; *Dixon, Gairloch etc.* p. 255 (1886); *Salvad. El. Ucc. Ital.* p. 265 (1886); *Scully, J. A. S. B.* lvi. p. 89 (1887); *Tacz. P. Z. S.* 1887, p. 611 (Corea), 1888, p. 469 (Corea); *Tristr. Cat. Coll. B.* p. 47 (1889); *Story, Research*, ii. p. 120 (1889); *Sharpe, Tr. Linn. Soc.* (2) *Zool.* v. p. 91 (1889); *id. Sec. Yark. Miss., Aves*, p. 130 (1891); *id. Cat. Osteol. Specim. Coll. Surg.* iii. p. 310 (1891); *Styan, Ibis*, 1891, pp. 328, 497 (Shanghai); *Dub. Faun. Vert. Bely., Ois.* ii. p. 482, pl. 264 (1892); *De la Touche, Ibis*, 1892, p. 493; *A. Newt. Dict. of B.* p. 369 (pt. 2, 1893); *Collett, Mindre Med. Norges Fugleſ.* 1881–92, p. 277 (1894).

Clangula leucomelas, *Brehm, Vög. Deutschl.* p. 927 (1831).

? Anas obesa, *Aliq. fide Temm. Man. d'Orn.* 2nd ed. iv. p. 550 (♀) (1840).

Fuligula vulgaris, *Hewitson, Col. Illustr. Eggs of Brit. B.* 3rd ed. p. 435 (1856).

Anas (Glaucion) clangula, *Schrenck, Reis. Amurl.* i. p. 481 (1860); *Radde, Reis. S. O.-Sibir.* ii. p. 374 (1863).

Platypus clangulus, *Hintz, J. f. O.* 1861, p. 464, 1863, p. 430, 1864, pp. 97, 191, 1866, p. 155.

Bucephala clangula, *G. R. Gr. Hand-list*, iii. p. 87, n. 10696 (1871); *Swinh. P. Z. S.* 1871, p. 419 (China); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Salvad. Faun. d'Ital., Ucc.* p. 267 (1872); *Swinh. Ibis*, 1873, p. 367; *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1345 (1873); *Coues, B. N.-West*, p. 576 (part.) (1874); *David & Oust. Ois. Chine*, p. 505 (1877); *Swinh. Ibis*, 1877, p. 147 (Hakodadi); *Gigl. Icon. Avif. Ital.* fasc. i. sp. & tav. 362 (1879); *Bolau, J. f. O.* 1881, p. 64 (Suifun); *Fiori, Atti Soc. Nat. Mod.* (3) iii. pp. 31–64, tav. 1 (1884)*; *Dörries, J. f. O.* 1888, p. 95.

Clangula hyemalis, *Blanf.* (*nec Linn.*) *East. Pers.* ii. p. 302 (1876) (*ex Pallas*).

Bucephalus clangula, *Prjev. in Rowl. Orn. Misc.* iii. p. 106 (Mongolia) (1878).

Clangula glaucium, *Hume, Str. Feath.* viii. p. 115, n. 971 bis (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 285, pl. 38 (1880); *Coues, Bull. Nutt. Orn. Club*, 1880, p. 101.

Fuligula (Glaucion) clangula, *Rchnw. Orn. Centralbl.* 1882, p. 6; *id. Vög. zool. Gärt.* p. 46 (1882).

Glaucionetta clangula, *Stejn. Pr. U.S. Nat. Mus.* viii. p. 409 (1885); *Ridgw. Man. N. Am. B.* p. 105 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Commander I.).

Hybrids.

Mergus anatarius, *Eimb. Isis*, 1831, p. 300, Taf. iii. ff. *a*, *b* (Braunschweig); *Bp. Cat. Met. Ucc. Eur.* p. 74 (1842); *Schleg. Rev. Crit.* p. 109 (1844) (=Anas clangula×Mergus albellus); *Degl. & Gerbe, Orn. Eur.* ii. p. 574, obs. (1867); *Schmidt, Arch. d. Naturg. in Mecklenb.* 1875, pp. 145–146; *R. Blas. M T. orn. Ver. Wien*, 1884, p. 119 (Kalmarsund): *Kolthoff, Öfv. K. Vet.-Ak. Förh.* 1884, no. 9, pp. 185–189, pls. xxxi., xxxii. (1885); *R. Blas. Monat. Schutze, Voyelw.* 1887, pp. 377–406, pls. v., vi., and cut (=M. albellus× Glaucion clangula).

Clangula angustirostris, *Brehm, Isis*, 1830, p. 999, n. 4 (descr. nulla); *id. Handb. Vög. Deutschl.* p. 930 (1831) (= ♀ M. anatarius, *Eimb.*); *Rchnb. Syn. Av.*, Natatores, t. 74. ff. 103, 104 (1845).

Muthmasslicher Bastard von Anas clangula und Mergus albellus, *Naum. Vög. Deutschl.* xii. pp. 194–197, Titelkupfer (♂) (1844).

Anas (Clangula) mergoides, *Kjärb. Orn. Danica, Danmark's Fugle*, Suppl. t. 30 (t. xlix) (1851?); *id. Naumannia*, 1853, p. 329.

Clangula mergoides, *Kjärb. Naumannia*, 1853, pp. 116, 327; *id. J. f. O.* 1853, Extraheft, p. 29; *id. Orn. Danica, Supplementtavle* lv. f. 7 (1858).

Anas mergoides, *Kjärbölling*; *Wolschke, JB. Annab. Ver.* 1883–85, pp. 112–127, pl. 1 (1886).

Clangula glaucion×Fuligula ferina, *Leverk. J. f. O.* 1890, p. 222, n. 1.

Clangula glaucion×Fuligula marila, *Leverk. J. f. O.* 1890, p. 222, n. 2.

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* "Studii anatomici e fisiologici sulla trachea della *Bucephala clangula*, comparativamente con quella di altri Anatini" (*l. c.*).

America (Clangula americana).

Anas clangula, *Forst. Phil. Trans.* lxii. p. 365 (1772); *Gm. S. N.* i. 2, p. 523, n. 23 (part., America) (1788); *Lath. Ind. Orn.* ii. p. 867, n. 87 (part.) (1790); *Wils. Am. Orn.* viii. p. 62, pl. 67. f. 5 (1814); *Vieill. N. D.* v. p. 117 (part., America) (1816); *Doughty's Cab. N. H.* i. p. 110, pl. 10 (1830).

Clangula chrysophthalmos, part., *Steph. Gen. Zool.* xii. 2, p. 182 (1824).

Fuligula clangula, *Bp. Ann. Lyc. N. Y.* ii. p. 393 (part., 1826); *id. Syn.* p. 393 (1828); *id. Isis*, 1832, p. 1189 (part.); *Aud. Orn. Biogr.* iv. p. 318, pl. 342 (1838); *id. Syn.* p. 292 (1839); *id. B. Am.* vi. p. 362 (part.), pl. 406 (1843); *Giraud, B. Long Isl.* p. 334 (1844); *Wied, J. f. O.* 1859, p. 178; *Wedderb. & Hurdis, Natural. in Bermuda*, p. 49 (1859), *cf. J. f. O.* 1859, p. 221 (Bermuda); *Schleg. Mus. P.-B.*, Anseres, p. 20 (part.) (1866); *Turnb. B. E. Pa.* 1869, p. 86; *Finsch, Abh. nat. Ver. Brem.* iii. p. 66 (1872).

Clangula vulgaris, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 456 (1831).

Fuligula (Clangula) clangula, *Nutt. Man.* ii. p. 441 (1834).

Clangula americana, *Bp. Comp. List*, p. 58, n. 392 (1838); *Eyt. Mon. Anat.* p. 167 (1838); *G. R. Gr. Gen. B.* iii. p. 622, n. 2 (1844); *Bp. Compt. Rend.* xxxviii. p. 664 (*Notes Coll. Delattre* p. 94) (1854); *id. Compt. Rend.* xliii. p. 651, n. 147 (1856); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Cab. & Gundl. J. f. O.* 1857, p. 230 (Cuba?); *Gundl. J. f. O.* 1862, pp. 93, 191, 1871, p. 290; *Sharpe, Cat. Osteol. Specim. Coll. Surg.* iii. p. 310 (1891).

Bucephala americana, *Baird, B. N. Am.* p. 796 (1858); *id. Cat. N. Am. B.* n. 593 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 259 (1860); *Blakist. Ibis*, 1862, p. 10 (Brit. N. Am.); *Ross, Canad. Nat.*, Apr. 1862; *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Elliot, Ann. Lyc. N. Y.* vii. pp. 451–454 (1862); *Blakist. Ibis*, 1863, p. 148; *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Brown, Ibis*, 1868, p. 426 (Vancouver); *Coues, Pr. Ess. Inst.* v. p. 200 (1868); *G. R. Gr. Hand-list*, iii. p. 87, n. 10697 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (Mazatlan) (1874).

Bucephala clangula, *Coues, Key*, p. 290 (1872); *id. Check-list*, n. 505 (1873); *id. B. N.-West*, p. 576 (part.) (1874); *Jeffries, Bull. Nutt. Orn. Club*, v. p. 189 (1880).

Clangula glaucion, *Sclat. & Salv. P. Z. S.* 1876, p. 401; *Lawr. Pr. U.S. Nat. Mus.* i. p. 241 (Barbuda) (1878); *Sclat. P. Z. S.* 1880, p. 527 (part.).

Clangula glaucium americana, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 204 (1880); *id. Nom. N. Am. B.* n. 620 (1881); *Matschie & Ziemer, J. f. O.* 1885, p. 191.

Clangula glaucium, *Coues, Bull. Nutt. Orn. Club*, 1880, p. 101; *id. Check-list*, 2nd ed. p. 115, n. 725 (1882); *id. Key N. Am. B.* 2nd ed. p. 704, n. 725 (1884); *Cory, Revis. List B. W. Ind.* i. p. 31 (1886).

Clangula glaucion americana, *B., B., & R. Water-B. N. Am.* ii. p. 44 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 438 (1884–85).

Fuligula glaucion americana, *Seeb. Hist. Brit. B.* iii. p. 591 (1885).

Glaucionetta clangula americana, *Stejn. Pr. U.S. Nat. Mus.* viii. p. 409 (1885); *A. O. U. Check-list N. Am. B.* p. 120, n. 151

(1886); *Turner, Contr. N. H. Alaska*, p. 134 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 72 (1887); *Ridgw. Man. N. Am. B.* p. 105 (1887); *Cory, Auk*, 1888, p. 67 (Cuba?, Barbuda); *Schalow, J. f. O.* 1891, p. 269; *Hatch, B. of Minnes.* p. 64 (1892); *Mackay, Auk*, 1894, p. 226.

Hybrids.

Clangula mergiformis, *Cabot, Pr. Bost. Soc. N. H.* v. pp. 57, 118–120 (1854) (=Clangula americana × Mergus cucullatus).

Fuligula americana (!) × Mergus cucullatus, *Leverk. J. f. O.* 1890, p. 224.

Adult male. Head and upper neck dark glossy green, the feathers on the crown and nape somewhat elongated; chin and throat black; a roundish white patch on the cheeks near the base of the upper mandible; lower neck, breast, and underparts white; on the sides of the vent the feathers have the bases slaty grey showing through; feathers of the flanks edged above with black, the longer ones on both webs; back, rump, and upper tail-coverts black; inner scapulars black, the outer ones white, longer scapulars with a white band along the middle; wings black, with a large white patch covering the central wing-coverts and the outer secondaries; the inner secondaries black; under wing-coverts greyish black; tail blackish grey: bill bluish black; irides golden yellow; feet orange-yellow, the webs dusky. Total length about 18 inches, wing 8·9, tail 4, culmen 1·4, tarsus 1·45.

Female. Head and upper neck hair-brown; a dull white collar round the lower neck; upper parts blackish; mantle, scapulars, and upper wing-coverts with pale greyish edges; breast greyish, with the edges of the feathers whitish; lower parts white; sides and flanks dull grey, the feathers edged with white; median wing-coverts brown tipped with whitish, the greater ones white tipped with brown; outer secondaries white; the white on the wing is defined by the brown band at the tip of the greater coverts; quills dusky brown; tail dull greyish: bill brownish black, in some specimens the tip, except the nail, is yellow: irides and legs and toes as in the male. Total length 17 inches, wing 7·7, culmen 1·35.

Young in first plumage resemble adult females, but are duller in colour; the pale collar round the neck is much more obscure, the grey feathers on the breast have white margins.

Males in first nuptial dress have less white on the scapulars, the white on the hind lower neck is mottled with brown, as is also the white spot at the base of the bill.

Males in moulting plumage resemble adult females, except that they retain the white wing of the adult male.

Young in down are dark brown on the upper parts, and paler brown on the breast and flanks, shading into white on the throat and into pale grey on the belly.

I have not been able to distinguish specifically the American from the Palæarctic Golden-eye.

Hab. Northern Hemisphere, breeding in the Arctic and Subarctic regions, in Europe as far south as N. Germany, Pomerania, the Caucasus, Siberia; migrates south as far as Southern Europe, rare in Northern Africa, Asia Minor, Persia, N. India, China, and Japan; in North America breeds from Maine and Canada northward; in winter south to Mexico and Cuba.

a. ♂ ad. sk.	Orkneys.	H. J. Elwes, Esq. [P.].
b. ♀ ad. sk.	Great Britain.	J. G. Children, Esq. [P.].
c. ♀ ad. st.	No locality.	Zool. Soc.
d. ♀ ad. sk.	Scotland.	Tweeddale Coll.
e–h. ♂ ♀ ad. et ♂ juv. sk.	England.	Hume Coll.
i, *k*. ♂ ♀ ad. st.	Norfolk, Jan.	Baker Coll.
l. ♀ ad. sk.	Gt. Yarmouth, Jan. (*G. Smith*).	Seebohm Coll.
m, *n*. ♂ ad. et ♂ imm. st.	Wales.	Earl of Cawdor [P.].
o. ♀ ad. sk.	R. Dovey, Wales, Jan.	Editor of 'Land and Water' [P.].
p, *q*. ♂ ♀ ad. sk.	Carmarthen.	Montagu Coll.
r. ♂ ad. sk.	Cambridge Market, Nov.	Salvin-Godman Coll.
s. ♂ juv. sk.	Pagham Harbour, March (*J. E. Harting*).	H. J. Elwes, Esq. [P.].
t. ♀ juv. sk.	Palestine.	Dr. Merrill [P.].
u. ♀ juv. sk.	Lenkoran, Dec.	Seebohm Coll.
v. ♂ ad. sk.	Lake Sirikul, May (*F. Stoliczka*).	India Museum [P.].
w. ♂ juv. sk.	Bala Morghab, Jan. (*Aitchison*).	Afghan Delimitation Comm. [P.].
x. ♂ juv. sk.	Banks of Indus, Dec.	Col. Yerbury [P.].
y. ♀ imm. sk.	Hassanpore, Dec. (*R. N. Stoker*).	Hume Coll.
z. ♂ ad. sk.	Oudh.	Hume Coll.
a', *b'*, *c'*. ♂ ♀ ad. sk.	Ghazi, Dec. (*R. N. Stoker*).	Hume Coll.
d', *e'*. ♂ ♀ ad. sk.	Valley of the Yen-e-sai, Siberia, lat. 66½°, June (*H. Seebohm*).	Seebohm Coll.
f'. ♀ ad. sk.	Kuku-nor, Feb. (*Prjevalsky*).	Seebohm Coll.
g', *h'*. ♀ ad. et ♂ imm. sk.	Pekin, China, Nov., Dec. (*R. Swinhoe*).	Seebohm Coll.
i', *k'*. ♀ ad. et ♂ imm. sk.	Shanghai, China, Nov., Dec. (*R. S. & A. Michie*).	Seebohm Coll.
l', *m'*. ♀ ad. et ♂ imm. sk.	Ningpo, China, Nov., Dec. (*R. S.*).	Seebohm Coll.
n'. ♀ ad. sk.	Japan.	Salvin-Godman Coll.
o', *p'*. ♂ ad. et ♀ juv. sk.	Hakodadi, Japan, Nov. (*Blakiston*).	Seebohm Coll.
q'. ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
r'. ♂ ad. sk.	Kowasaki, Japan, Jan. (*H. Pryer*).	Seebohm Coll.
s'. ♂ ad. sk.	Nagasaki, Japan, Dec.	F. Ringer, Esq. [P.].
t'. ♂ imm. sk.	Tsu-shima, Nov. (*P. A. Holst*).	Seebohm Coll.

u'. ♀ ad. sk.	N. America.	Lord Ampthill [P.].
v'. ♂ ad. sk.	Nulato, Alaska, spring (*E. W. Nelson*).	Salvin-Godman Coll.
w'. ♂ ad sk.	Big Island.	B. R. Ross, Esq. [P.].
x'. ♂ ad. sk.	Canada.	Government of Canada [P.].
y'. ♂ ad. sk.	Godbout, Canada, March (*N.A. Comeau*).	Salvin-Godman Coll.
z', *a''*. ♂ ♀ ad. st.	Nova Scotia.	Old Coll.
b''. ♂ ad. sk.	Lyons Falls, New York, April (*A. J. Dayan*).	Salvin-Godman Coll.
c''. Pull. sk.	Adirondacks, New York, June (*C. H. Merriam*).	Salvin-Godman Coll.
d''. ♀ ad. sk.	Cape Cod, Massachusetts, Jan. (*W. Brewster*).	Salvin-Godman Coll.
e''. ♀ ad. sk.	Massachusetts, Oct. (*H. W. Henshaw*).	Salvin-Godman Coll.
f''. ♂ ad. sk.	Illinois (*E. W. Nelson & Jencks*).	Salvin-Godman Coll.
g''. ♀ ad. sk.	Chicago, Illinois (*Nelson & Jencks*).	Salvin-Godman Coll.
h'', *i''*. ♂ juv. sk.	Penistons Pond, Bermuda, Feb., Dec.	Capt. S. G. Reid [P.].
k'', *l''*. Skeletons.	Europe.	Salvin-Godman Coll.
m''. Skeleton.	England.	Purchased.
n''. Skeleton.	England.	Dr. Günther [P.].
o''. Skeleton.	England.	Purchased.
p''–*s''*. Sterna.	England.	M. Lefebvre [C.].
t''–*w''*. Sterna.		

2. Clangula islandica.

Clangula, *Briss. Orn.* vi. p. 416, pl. xxxvii. f. 2 (1760).

Iceland Duck, *Lath. Syn.* iii. 2, p. 545, n. 83 (1785).

Anas islandica, *Gm. Syst N.* i. 2, p. 541, n. 116 (1788); *Lath. Ind. Orn.* ii. p. 871, n. 95 (1790); *Bonn. Enc. Méth.* i. p. 133 (1790); *Vieill. N. D.* v. p. 121 (1816); *Dum. Dict. Sc. Nat.* vi. pp. 376, 378 (1817); *Naum. Vög. Deutschl.* xii. p. 186, Taf. 317 (1842); *Thienem. Reise*, ii. p. 251, tab. iii. (1827); *Krüper, Naumannia*, 1857, i. p. 40; *Gieb. Thes. Orn.* i. p. 354 (1872).

Anas clangula, *Faber* (*nec Linn.*), *Prodr. Island. Orn.* p. 71, sp. 5 (1822).

Fuligula islandica, *Steph. Gen. Zool.* xii. 2, p. 192 (1824); *Schleg. Mus. P.-B.*, Anseres, p. 121 (1866); *Finsch, Abh. nat. Ver. Brem.* iii. p. 67 (1872); *Seeb. Hist. Brit. B.* iii. p. 593 (1885).

Clangula scapularis, *Brehm, Isis*, 1830, p. 999, n. 1; *id. Vög. Deutschl.* p. 932 (1831).

Clangula barrovii, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 456, pl. 70 (1831), *cf. P. Z. S.* 1831, p. 132; *Gould, B. Eur.* v. pl. 380 (1837); *Less. Compl. de Buff., Ois.* 2nd ed. p. 721 (1838); *Sw. An. in Menag.* p. 271 (1838); *Bp. Comp. List*, p. 58 (1838); *Eyt. Mon. Anat.* p. 165 (1838); *Holboell, Kröyer's Naturhist. Tidsskr.* iv. p. 437 (1843); *id. Orn. Beitr. Faun. Grönl.* (*Paulsen's Uebers.*) p. 65 (1846); *Licht. Nomencl. Av.* p. 102 (1854).

Fuligula (Clangula) barrovii, *Nutt. Man.* ii. p. 444 (1834); *Selys.-L. Faun. Belg.* p. 146 (1842); *Degl. Orn. Eur.* ii. p. 446 (1849); *Preyer, Reise*, p. 409 (1862); *Bree, B. Eur.* iv. p. 164 (1863).

Platypus barrowi, *Reinh.* (*sen.*), *K. Dansk. Selsk. Naturvid. Afh.* 1838, p. 103; *id. Faun. Groenl.* p. 21, sp. 8, f. 3 (1846).

Fuligula clangula, var., *Aud. Orn. Biogr.* v. p. 105, pl. 403 (1839); *id. Syn.* p. 292 (part.) (1839); *id. B. Am.* vii. p. 362 (part.) (1843).

Anas barrowii, *Temm. Man. d'Orn.* 2nd ed. iv. p. 551 (1840); *Schleg. Rev. Crit.* p. cxviii (1844); *Pässl. J. f. O.* 1853, p. 319.

Glaucion islandicum, *K. & B. Wirbelth. Eur.* pp. lxxxvi, 229 (1840).

Clangula islandica, *Bp. Cat. Met. Ucc. Eur.* p. 74, n. 459 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 145 (1844); *id. Gen. B.* iii. p. 622, n. 3 (1844); *Rchnb. Syn. Av.*, Natatores, t. 74. ff. 99–102 (1845); *Reinh. J. f. O.* 1854, p. 441 (Greenland); *Bp. Compt. Rend.* xliii. p. 651, n. 148 (1856); *Reinh. Ibis*, 1861, p. 14 (Greenland, breeding); *Baird, Ibis*, 1867, p. 284; *Degl. & Gerb. Orn. Eur.* ii. p. 544 (1867); *Saund. Bull. Soc. Zool. Fr.* ii. p. 200 (Valencia!) (1877); *Dress. B. of Eur.* vi. p. 603, pl. 441 (1878); *Sclat. P. Z. S.* 1880, p. 527; *Ridgw. Nom. N. Am. B.* n. 619 (1881); *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *Coues, Check-list*, 2nd ed. p. 115, n. 726 (1882); *B. O. U. List Brit. B.* p. 131 (1883); *Hartl. J. f. O.* 1883, p. 282 (Alaska); *Coues, Key N. Am. B.* 2nd ed. p. 704, n. 726 (1884); *B., B., & R. Water-B. N. Am.* ii p. 41 (1884); *Saund. in Yarrell's Hist. Brit. B.* iv. p. 436 (1884–85); *Tristr. Cat. Coll. B.* p. 47 (1889); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 486, pl. 265 (1892); *A. Newt. Dict. of B.* p. 369 (pt. 2, 1893).

Bucephala islandica, *Baird, B. N. Am.* p. 796 (1858); *id. Cat. N. Am. B.* n. 594 (1859); *Elliot, Ann. Lyc. Nat. Hist. N. Y.* vii. pp. 449–454 (1862); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 129 (Maine) (1862); *Blakist. Ibis*, 1863, p. 148; *Elliot, B. N. Am.* ii. pl. xlvi. (pt. 11, 1866); *Coues, Pr. Ess. Inst.* v. p. 300 (New England); *Dall & Bann. Tr. Chic. Acad.* i. p. 98 (Sitka and the Yukon) (1869); *G. R. Gr. Hand-list*, iii. p. 87, n. 10698 (1871); *Coues, Key*, p. 290 (1872); *id. Check-list*, n. 506 (1873); *id. Birds N.-West*, p. 577 (1874).

Glaucion islandicum, *Nordm. J. f. O.* 1864, p. 378 (Lapland); *Brewer, Bull. Nutt. Orn. Club*, iv. pp. 148–152 (1879); *Jeffries, l. c.* v. p. 189 (1880).

Fuligula clangula, var. islandica, *Palmén, J. f. O.* 1876, p. 58 (Finland).

Fuligula (Glaucion) islandica, *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 47 (1882).

Glaucionetta islandica, *Stejn. Pr. U.S. Nat. Mus.* viii. p. 409 (1885); *Nelson, Nat. Hist. Coll. in Alaska*, p. 72 (1887); *Ridgw. Man. N. Am. B.* p. 105 (1887); *Shufeldt, Pr. U.S. Nat. Mus.* xi. p. 230 and foll., ff. 19, 21, 26 (osteology) (1888); *Hatch, B. of Minnes.* p. 65 (1892).

Adult male. Head and neck black, glossed with purple; at the base of the bill, between the bill and the eye, is a crescentic white patch; lower part of the neck all round and remainder of underparts white; back, rump, upper tail-coverts, and wings black; scapulars with a silky white mark on the inner part, or along the middle of the longer ones; besides, the scapulars are bifid at the tip, part of the outer web being much longer than the rest and projecting beyond the tip of the feather; a long white patch on the

wing, formed by the median wing-coverts, the tips of the greater ones, and by the secondaries, obliquely divided by a black band formed by the base of the greater coverts; inner secondaries or tertials black with a purple gloss; under wing-coverts and axillaries black; feathers of the flanks broadly edged with black; sides of the rump black; sides of the vent and outer under tail-coverts tinged with dark grey; tail dark brown-grey, with a slight gloss: bill dark plumbeous; iris rich yellow; legs and toes yellow, webs dusky. Total length about 20 inches, wing 9·6, tail 4·5, culmen 1·45, tarsus 1·55.

Female. Similar to that of *C. glaucion*, but larger, the grey of the chest broader and usually deeper, and the white collar narrower; greater wing-coverts always (?) distinctly tipped with blackish. Total length 18 inches, wing 8·25–8·75.

Hab. Iceland, occasionally straying to Europe; Northern America from Greenland to Alaska, south in winter to New York, Illinois, Utah, &c.

a, *b*, *c*. ♂ ad. st.	Iceland.	Purchased.
d. ♂ ad. sk.	Iceland.	Prof. A. Newton [P.].
e. ♂ ad. sk.	N. America (*H. W. Henshaw*).	Salvin-Godman Coll.
f, *g*. ♂ ad. et pull. sk.	Godbout, Canada, March, July (*N. A. Comeau*).	Salvin-Godman Coll.
h, *i*, *k*. ♂ ♀ ad. et ♀ imm. sk.	W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
l. ♀ ad. sk.	Alkali Lake, W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
m, *n*. ♂ ad. sk.	Orcas Island, near Vancouver I., April.	Dr. Lyall [P.].
o, *p*. ♂ ♀ ad. sk.	Upper Klamath Lake, Oregon, January (*A. Forrer*).	Salvin-Godman Coll.

3. Clangula albeola.

Little Black and White Duck, *Edw. Nat. Hist. B.* ii. pl. 100 (1747) (Newfoundland).

Buffel's Head Duck, *Catesb. Carol.* i. t. 95 (♂) (Carolina) (1754); *Lath. Syn.* iii. 2, p. 533, n. 75 (1785).

Little Brown Duck, *Catesb. Carol.* i. t. 98 (♀) (1754); *Lath. Syn.* iii. 2, p. 534 (1785).

Anas hyberna, *Briss. Orn.* vi. p. 349 (1760) (*ex Catesby*).

Querquedula ludoviciana, *Briss. Orn.* vi. p. 461, pl. xli. f. 1 (1760).

Querquedula carolinensis, *Briss. Orn.* vi. p. 464 (1760).

Anas albeola, *Linn. S. N.* i. p. 199, n. 18 (1766) (*ex Edwards*); *Forst. Phil. Trans.* lxii. pp. 383, 416 (1772); *Gm. S. N.* i. 2, p. 517, n. 18 (1788); *Lath. Ind. Orn.* ii. p. 866, n. 86 (1790); *Bonn. Enc. Méth.* i. p. 157, pl. 41. f. 1 (1791); *Wils. Am. Orn.* viii. p. 51, pl. 62. ff. 2, 3 (1814); *Vieill. N. D.* v. p. 119 (1816); *Dum. Dict. Sc. Nat.* vi. p. 398 (1817); *Donovan, Brit. B.* x. pl. 226 (1819); *Less. Tr. d'Orn.* p. 631 (1831); *Schleg. Rev. Crit.* p. cxix (1844); *Gieb. Thes. Orn.* i. p. 344 (1872).

Anas bucephala, *Linn. S. N.* i. p. 200, n. 21 (♂) (1766) (*ex Catesby*, t. 95); *Gm. S. N.* i. 2, p. 521, n. 21 (1788); *Bonn. Enc. Méth.* i.

p. 127, pl. 35. f. 2 (1790); *Vieill. N. D.* v. p. 169 (1816); *Dum. Dict. Sc. Nat.* vi. p. 382 (1817).

Anas rustica, *Linn. S. N.* i. p. 201, n. 24 (♀) (1766) (*ex Catesby*, t. 98); *Gm. S. N.* i. 2, p. 524, n. 24 (1788); *Vieill. N. D.* v. p. 170 (1816); *Dum. Dict. Sc. Nat.* vi. p. 398 (1817).

Sarcelle de la Louisiana, ditte la Religieuse, *D'Aubent. Pl. Enl.* 948 (♂).

Sarcelle blanche et noire, *Buff. Hist. Nat. Ois.* ix. p. 284 (1783).

Petit canard à grosse tête, *Buff. l. c.* p. 249 (♂).

Sarcelle de la Caroline, *Buff. l. c.* p. 286 (♀).

Clangula albeola, *Steph. Gen. Zool.* xii. 2, p. 184 (1824); *Boie, Isis*, 1826, p. 980; *Sw. & Rich. Faun. Bor.-Am.* ii. p. 458 (1831); *Jen. Man.* p. 246 (1835) (England); *Eyt. Mon. Anat.* p. 164 (1838); *Bp. Comp. List*, p. 58 (1838); *Vig. Zool. Beech. Voy.* p. 32 (1839); *Bp. Cat. Met. Ucc. Eur.* p. 74 (1842); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 144 (1844); *id. Gen. B.* iii. p. 622, n. 5 (1844); *Rchnb. Syn. Av.*, Natatores, t. 74. ff. 105–106 (1845); *Bp. Rev. Crit.* p. 106 (1850); *Baird, Stansbury's Rep.* p. 324 (1852); *Licht. Nomencl. Av.* p. 102 (1854); *Reinh. J. f. O.* 1854, p. 442 (Greenland); *Bp. Compt. Rend.* xxxviii. p. 664 (*Not. Coll. Delattre*, p. 94) (1854); *id. Compt. Rend.* xliii. p. 651, n. 149 (1856); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Cab. & Gundl. J. f. O.* 1857, p. 230 (Cuba); *Heerm. P. R. R. Rep.* x. pt. vi. p. 70 (1859); *Murr. Edinb. New Phil. Journ.* 1859, p. 230; *Brewer, Proc. Bost. Soc. N. H.* vii. p. 308 (Cuba) (1860); *Reinh. Ibis*, 1861, p. 14 (Greenland); *Gundl. J. f. O.* 1861, p. 346 (Cuba), 1862, p. 93; *Degl. & Gerbe, Orn. Eur.* ii. p. 545 (1867); *Newt. P. Z. S.* 1871, p. 57 (egg); *Harting, Man. Br. Birds*, p. 161 (Great Britain) (1872); *Pelz. Ibis*, 1873, p. 46; *Sclat. & Salv. P. Z. S.* 1876, p. 401; *Dress. B. of Eur.* vi. p. 589, pl. 439 (1877); *Scl. P. Z. S.* 1880, p. 527; *Ridgw. Nom. N. Am. B.* n. 621 (1881); *Bean, Pr. U.S. Nat. Mus.* v. p. 167 (1882) (Unalaska); *Coues, Check-list*, 2nd ed. p. 115, n. 727 (1882); *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *B. O. U. List Brit. B.* p. 132 (1883); *Hartl. J. f. O.* 1883, p. 282 (Alaska); *id. Key N. Am. B.* 2nd ed. p. 705 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 48 (1884); *Saund. in Yarr. Brit. B.* iv. p. 442 (1884–85); *Cory, List B. W. Ind.* p. 31 (1885); *Turner, Auk*, 1885, p. 158; *Nehrl. J. f. O.* 1885, p. 147 (Illinois); *Matsch. u. Ziemer, ibid.* p. 191; *Tristr. Cat. Coll. B.* p. 47 (1889); *Sharpe, Cat. Ostcol. Specim. Coll. Surg.* iii. p. 310 (1891).

Fuligula albeola, *Bp. Ann. Lyc. N. Y.* ii. p. 394 (1826); *id. Syn.* p. 394 (1828); *id. Isis*, 1832, p. 1190; *Nutt. Man.* ii. p. 445 (1834); *Aud. Orn. Biogr.* iv. p. 217, pl. 225 (1838); *id. Syn.* p. 293 (1839); *id. B. Am.* vi. p. 369, pl. 408 (1843); *Giraud, B. Long Isl.* p. 335 (1844); *De Kay, N. Y. Zool.* ii. p. 329 (1844); *Wied, J. f. O.* 1859, p. 179; *Schleg. Mus. P.-B.*, Anseres, p. 22 (1866); *Seeb. Hist. Brit. B.* iii. p. 588 (1885); *Brandt, J. f. O.* 1891, p. 269 (Sitka); *Hartert, Kat. Vogelsamml.* p. 232 (1891).

Anas (Fuligula) albeola, *Nutt. Man.* ii. p. 445 (1834).

Platypus albeola, *Reinh. K. Danske Vid. Selsk. Afhdl.* vii. p. 104 (1838) (Greenland).

Clangula bucephala, *Licht. Nomencl.* p. 102 (1854)*.

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* Lichtenstein makes *C. bucephala* different from *C. albeola*!

Bucephala albeola, *Baird, B. N. Am.* p. 797 (1858); *id. Cat. N. Am. B.* n. 595 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 259 (1860); *Blakist. Ibis*, 1862, p. 10, 1863, p. 148; *Dress. Ibis*, 1866, p. 44 (Texas); *Coues, Pr. Ac. Philad.* 1866, p. 99 (Arizona); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Gundl. Repert. Fis.-Nat. Cuba*, i. p. 390 (1866); *Brown, Ibis*, 1868, p. 426 (Vancouver I.); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (Alaska, breeding) (1869); *Stev. U.S. Geol. Surv. Terr.* 1870, p. 466 (Wyoming); *G. R. Gr. Hand-list*, ii. p. 87, n. 10699 (1871); *Aiken, Pr. Bost. Soc.* xv. p. 210 (Colorado) (1872); *Coues, Key*, p. 290 (1872); *id. Check-list N. Am. B.* n. 507 (1873); *Snow, B. Kans.* p. 11 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Coues, Birds N.-West*, p. 577 (1874); *Gundl. J. f. O.* 1875, p. 383 (Cuba); *Salv. P. Z. S.* 1883, p. 428 (Esquimalt).

Fuligula (Glaucion) albeola, *Rehnw. Orn. Centralbl.* 1882, p. 5.

Charitonetta albeola, *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 166 (1885) (Commander Islands); *A. O. U. Check-list N. Am. B.* p. 120, n. 153 (1886); *Turner, Contr. N. H. of Alaska*, p. 134 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 72 (1887); *Ridgw. Man. N. Am. B.* p. 106 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Commander I.); *Cory, Auk*, 1888, p. 67 (Cuba); *Hatch, B. of Minnes.* p. 66 (1892).

Adult male. Head and upper half of the neck metallic green, with a purple gloss on the crown, sides of the neck, and throat; a large patch of pure white on the sides of the head, extending from the eye back to the occiput; lower neck all round, breast, and underparts pure white; back and rump black; upper tail-coverts pearl-grey; scapulars white, the longer ones tipped with black; wings black, with a large white patch covering the central wing-coverts and the secondaries; marginal wing-coverts black, edged with white; under wing-coverts blackish, more or less edged with white; axillaries black; tail dark grey: bill bluish black; irides dark brown; legs and toes pinkish, the webs and joints darker. Total length about 15 inches, wing 7, tail 3·5, culmen 1, tarsus 1·1.

Female. Head and neck brown, with a slight purple gloss; a white longitudinal patch on the cheeks and ear-coverts; upper parts blackish brown, rump blacker; upper tail-coverts greyish; underparts white; sides, flanks, vent, and under tail-coverts dull greyish, also the breast slightly tinged with grey; apical half of the secondaries white, forming the speculum; the greater wing-coverts have subapical white spots, and are edged with white at the tip; tail brownish grey: bill dusky, inclining to plumbeous at end and along commissure; iris dark brown; legs and toes dilute lilac-pink, the webs and joints darker. Total length about 12·5 inches, wing 6, culmen 1, tarsus 1.

Young males in the first autumn resemble females.

Hab. North America, breeding northward from Labrador to Alaska; migrating south in winter to Mexico; occasionally straying to Cuba, Europe, and to Asia (Commander Islands).

a. ♂ ad. st.	N. America.	Hardwicke Bequest.
b. ♂ juv. st.	N. America.	Audubon Coll.

c. ♂ ad. st.	N. America.	Clark Kennedy, Esq. [C.].
d. ♂ ad. sk.	N. America.	Lord Ampthill [P.].
e. ♂ ad. sk.	N. America.	Salvin-Godman Coll.
f. ♀ ad. sk.	N. America.	H.J. Elwes, Esq. [P.].
g. ♂ ad. sk.	Vancouver's Island.	J. K. Lord, Esq. [P.].
h. ♂ ad. sk.	Semiahmoo Bay, Vancouver I., March.	Dr. Lyall [P.].
i, k. ♂ ♀ ad. st.	North Land Expedition.	Sir G. Back [P.].
l. ♀ ad. sk.	Fort Reliance, Upper Yukon, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
m, n. ? ♂ juv. sk.	British Columbia.	J. K. Lord, Esq. [P.].
o. ♂ ad. sk.	Esquimalt, Brit. Columbia (*Capt. Markham*).	Salvin-Godman Coll.
p. ♂ ad. sk.	Potomac R., Esquimalt (*J. J. Albert*).	Salvin-Godman Coll.
q, r. ♂ ad. et juv. sk.	Canada.	Government of Canada [P.].
s. ♂ ad. sk.	Little Musquash Harbour, New Brunswick, March (*H. E. Dresser*).	H. J. Elwes, Esq. [P.].
t, u. ♂ ♀ ad. st.	Nova Scotia.	Old Coll.
v. ♀ ad. sk.	49th Parallel.	N. America Boundary Comm. [P.].
w. ♂ ad. sk.	Fort Dufferin, April.	N. America Boundary Comm. [P.].
x. ♂ ad. sk.	North Dakota, May.	E. S. Cameron, Esq. [P.].
y. ♀ ad. sk.	Big Moose Lake, New York, Oct. (*C. H. Merriam*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Massachusetts, Oct. (*H. W. Henshaw*).	Salvin-Godman Coll.
a'. ♀ juv. sk.	Gibson, Indiana, April (*W. Brewster*).	Salvin-Godman Coll.
b'. ♀ ad. sk.	Tarpon Springs, Florida, Nov. (*W. E. D. Scott*).	Salvin-Godman Coll.
c'. ♀ juv. sk.	Lake Birgue, Louisiana, March (*H. W. H.*).	Salvin-Godman Coll.
d'–m'. ♂ ♀ ad. et imm. sk.	Corpus Christi, Texas, March, Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
n', o'. ♂ ad. sk.	Brownsville, Texas, March, Aug. (*F. B. A.*).	Salvin-Godman Coll.
p'. ♂ ad. st.	Norfolk, England.	Purchased.

48. HARELDA.

	Type.
Harelda, *Leach, MS.*?; *Steph. in Shaw's Gen. Zool.* xii. 2, p. 174 (1824)	H. glacialis.
Pagonetta, *Kaup, Natürl. Syst.* p. 66 (1829)	H. glacialis.
Crymonessa, *Macgill. Man. Brit. Orn.* ii. p. 185 (1842).	H. glacialis.
Melonetta, *Sundev. Tent.* p. 149 (1872) (=Harelda).	
Clangula, *A. O. U. Check-list N. Amer. B.* p. 120 (1886) (*nec Leach*, 1819)	H. glacialis.

Range. Confined to the Northern Hemisphere.

1. Harelda glacialis.

Long-tailed Duck from Hudson's Bay, *Edw. Birds*, iii. pl. 156 (♂) (1750).

Long-tailed Duck from New-Foundland, *Edw. Glean. of Nat. Hist.* ii. p. 146, pl. 280 (♂) (1755); *Lath. Syn.* iii. 2, p. 528, n. 72 (1785).

Anas longicauda islandica, *Briss. Orn.* vi. p. 379 (1760).

Anas longicauda *ex* Insula Terræ-novæ, *Briss. op. cit.* p. 382 (1760).

Querquedula ferroensis, *Briss. op. cit.* p. 466, pl. xl. f. 2 (♀ or ♂ juv.) (1760).

Anas hyemalis, *Linn. S. N.* i. p. 202, n. 29 (1766); *Scop. Ann.* I. *Hist. Nat.* p. 61, n. 74 (1769); *Fabr. Faun. Græn.* p. 71 (1780); *Gm. S. N.* i. 2, p. 529, n. 29 (1788); *Bonn. Enc. Méth.* i. p. 134 (1790); *Dum. Dict. Sc. Nat.* vi. p. 393 (1817); ? *Ménétr. Cat. Rais. Cauc.* p. 58 (Bakou) (1832).

Anas glacialis, *Linn. S. N.* i. p. 203, n. 30 (1766); *Forst. Linn. Trans.* lxii. p. 418 (1772); *Gm. S. N.* i. 2, p. 529, n. 30 (1788); *Lath. Ind. Orn.* ii. p. 864, n. 82 (1790); *Bonn. Enc. Méth.* i. p. 129, pl. 37. f. 4 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 276 (1811); *Mont. Orn. Dict. Suppl.*, DEF. pl. —. f. iii. (trachea) (1813); *Wils. Am. Orn.* viii. pp. 93, 96, pl. 70. ff. 1 (♂), 2 (♀) (1814); *Temm. Man. d'Orn.* p. 558 (1815); *Vieill. N. D.* v. p. 122 (1816); *Dum. Dict. Sc. Nat.* vi. p. 386 (1817); *Sabine, Tr. Linn. Soc.* xii. p. 555, pl. 30. ff. 3, 4 (trachea) (1817); *Temm. Man.* 2nd ed. ii. p. 860 (1820); *Sabine, App. to Parry's 1st Voy.* p. ccviii (1821); *Licht. Verz. Doubl.* p. 85 (1823); *Rich. App. to Parry's 2nd Voy.* p. 373 (1825); *Bp. Specch. Comp.* p. 73, n. 259 (1827); *Less. Tr. d'Orn.* p. 631 (1831); *Temm. Man. d'Orn.* iv. p. 553 (1840); *Schleg. Rev. Crit.* p. cxvii (1844); *Naum. Vög. Deutschl.* xii. p. 210, pl. 319 (1844); *Midd. Sibir. Reis.* ii. 2, p. 236 (1853).

Sarcelle de l'isle Ferroë, *D'Aubent. Pl. Enl.* 999 (♀) (17— ?).

Canard de Miclon, *D'Aubent. Pl. Enl.* 1008 (♂) (17— ?).

Canard à longue queue de Terre-neuve, *Buff. Hist. Nat. Ois.* ix. p. 202 (1783).

Anas sawka, *Lepech. Itiner.* iii. icon. bona (*fide Pall. Zoogr. R.-A.* ii. p. 276).

Anas miclonia, *Bodd. Tabl. Pl. Enl.* p. 58, pl. 1008 (1783).

Anas brachyrhynchos, *Beseke, Vög. Kurl.* p. 50, pl. 6 (1792).

Anas leucocephala, *Bechst. Taschenb.* ii. Taf. 29 (juv.) (1803).

Anas longicauda, *Leach* (*nec Briss.*), *Cat. M. & B. Brit. Mus.* p. 37 (1816).

Clangula glacialis, *Leach, in Ross's Voy. Discov.*, App. p. xlviii (1819); *Flem. Philos. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 563, n. 1; *Brehm, Vög. Deutschl.* p. 937 (1831); *Holb. Faun. Grönl.* (*Paulsen's transl.*) p. 64 (1846).

Platypus glacialis, *Brehm, Lehrb. eur. Vög.* ii. p. 840 (1824); *Faber, Isis*, 1826, p. 323; *Schilling, J. f. O.* 1853, p. 378.

Platypus faberi, *Brehm, op. cit.* p. 1004 (1824); *Faber, Isis*, 1826, p. 323.

Harelda glacialis, *Steph. Gen. Zool.* xii. 2, p. 175, pl. 58 (1824); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 460 (1831); *Jen. Man.* p. 247 (1835); *Eyt. Cat. Brit. B.* p. 59 (1836); *Gould, B. Eur.* v. pl. 382 (1837); *Eyt. Mon. Anat.* pp. 65, 162, pl. 14 (skeleton and trachea) (1838); *Bp. Comp. List*, p. 59 (1838); *K. & B. Wirbelth. Eur.*

pp. lxxxvii, 229 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 74 (1842); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 145 (1844); *id. Gen. B.* iii. p. 622 (1844); *Rchnb. Syn. Av.*, Natatores, t. 76. ff. 112–115 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 307 (1849); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Licht. Nomencl. Av.* p. 103 (1854); *Bp. Compt. Rend.* xliii. p. 651, n. 145 (1856); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Baird, B. N. Am.* p. 800 (1858); *id. Cat. N. Am. B.* n. 597 (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 230 (Hudson's Bay); *Coop. & Suckl. N. H. Wash. Terr.* p. 261 (1860); *Reinh. Ibis*, 1861, p. 14 (Greenland); *Ross, Canad. Natur.* Apr. 1862 (Mackenzie); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Boardm. Pr. Bost. Soc.* ix. p. 139 (1862); *G. R. Gr. List Brit. B.* p. 203 (1863); *Blakist. Ibis*, 1863, p. 149 (Brit. N. Am.); *Swinh. P. Z. S.* 1863, p. 324; *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1863, p. 108, 1864, p. 399; *id. J. f. O.* 1863, p. 379 (Spitsbergen); *A. Newt. Ibis*, 1865, p. 515 (Spitsbergen); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Whitely, Ibis*, 1867, p. 208 (Hakodadi); *Degl. & Gerbe, Orn. Eur.* ii. p. 549 (1867); *Coues, Pr. Ess. Inst.* v. p. 206 (1868); *Brown, Ibis*, 1868, p. 426 (Vancouver); *Droste, J. f. O.* 1868, p. 43 (Borkum), 1869, p. 347 (Faroe); *Eyt. Syn. Anat.* p. 121 (1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 298 (1869); *Gillett, Ibis*, 1870, p. 309 (Nova-Zemlia); *Gould, B. Great Brit.* v. pl. 33 (1870); *Swinh. P. Z. S.* 1871, p. 419 (Takoo); *G. R. Gr. Hand-list*, iii. p. 87, n. 10701 (1871); *Heugl. J. f. O.* 1871, pp. 89, 92, 105 (Spitsbergen); *id. Ibis*, 1872, p. 63; *Finsch, Abh. Brem. Ver.* iii. p. 67 (1872); *Heugl. J. f. O.* 1872, p. 122 (Novaja Semlja and Wigatsch); *Fritsch, J. f. O.* 1872, p. 371; *Coues, Key*, p. 291 (1872); *id. Check-list*, n. 508 (1873); *Finsch, Die Zweite deutsche Nordpolarfahrt*, ii. *Vögel*, p. 208 (1873); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 5 (1873); *id. Avif. Aleut. Isl. Unal. west.* p. 7 (1874); *Ridgw. Ann. Lyc. N. Y.* x. p. 390 (Lake Michigan) (1874); *Coues, B. N.-West*, p. 579 (1874); *id. in Elliott's Aff. Alaska*, p. 191 (1875); *Dress. B. Eur.* vi. p. 617, pls. 443 (♀ & juv.), 444 (♂ ad.) (1875); *Seeb. & Harvie Brown, Ibis*, 1876, p. 445 (Petchora); *Tacz. J. f. O.* 1876, p. 202 (Ussuri); *Homey. J. f. O.* 1876, p. 317; *Tacz. Orn. Vost. Sibir.* p. 71 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 48 (1877); *Swinh. Ibis*, 1877, p. 147 (Hakodadi); *Feild. P. Z. S.* 1877, pp. 30, 31 (N. Polar Basin); *id. Ibis*, 1877, p. 411 (Floeberg Beach, lat. 82° 27′ N., Grinnel Land); *David & Oust. Ois. Chine*, p. 506 (1877); *Blakist & Pryer, Ibis*, 1878, p. 215 (Yezo); *Adams, ibid.* p. 433 (Michalaski); *Seeb. Ibis*, 1879, p. 23; *Finsch, Verh. z.-b. Ver. Wien*, 1879, p. 152 (W. Siberia); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 186 (1880); *Sclat. P. Z. S.* 1880, p. 527; *Ridgw. Nom. N. Am. B.* n. 623 (1881); *Elliott, Mon. Seal-Isl.* p. 130 (1881); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 100 (1882); *Coues, Check-list*, 2nd ed. p. 115, n. 728 (1882); *Salv. Cat. B. Strickl. Coll.* p. 539 (1882); *B. O. U. List Brit. B.* p. 133 (1883); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 120 (Labrador); *Nelson, Cruise 'Corwin,'* p. 99 (1883); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883); *id. J. f. O.* 1883, p. 73 (Pirano); *Hartl. J. f. O.* 1883, p. 282 (Alaska); *Radde, Ornis Caucas.* p. 464 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 706, n. 728 (1884); *Saund. Yarrell's Brit. B.* iv. p. 446 (1884–85); *Murdoch, Rep. Exp. Point Barrow*, p. 118 (1885); *Nehrl. J. f. O.* 1885, p. 147 (Illinois); *Salvad. El. Ucc. Ital.* p. 266 (1886); *Tristr. Cat. Coll. B.* p. 47 (1889);

Sharpe, Cat. Osteol. Specim. Coll. Surg. iii. p. 307 (1891); *Ogilvie, Zoolog.* 1892, p. 109 (Suffolk); *Dub. Faun. Vert. Belg., Ois.* ii. p. 489, pl. 267 (1892); *Pears. & Bidw. Ibis*, 1894, p. 232 (N. Norway); *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881–82, p. 276 (1894).

Anas (Fuligula) glacialis, *Bp. Obs. Nomencl. Wils.* n. 275 (1825).

Fuligula glacialis, *Bp. Ann. Lyc. Nat. Hist. N. York*, ii. p. 395 (1826); *id. Isis*, 1832, p. 1190; *Savi, Orn. Tosc.* iii. p. 140 (1831); *Mont. Orn. Dict.* 2nd ed. ii. p. 516, f. *c*, p. 515 (trachea) (1831); *Aud. Orn. Biogr.* iv. p. 403, pl. 318 (1838); *id. Syn.* p. 295 (1839); *id. B. Am.* vi. p. 379, pl. 410 (1843); *Selys-L. Faun. Belg.* i. p. 146 (1842); *De Kay, N. Y. Zool.* ii. p. 328 (1844); *Giraud, B. Long Isl.* p. 337 (1844); *Degl. Orn. Eur.* ii. p. 447 (1844); *Wallengr. Naumannia*, 1854, p. 275; *Schleg. Mus. P.-B.*, Anseres, p. 23 (1866); *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 456 (1871); *Palmén, J. f. O.* 1876, p. 59 (Finland); *Brandt, J. f. O.* 1880, p. 249 (St. Petersburg); *Seeb. Hist. Brit. B.* iii. p. 598, pl. 66 (1885); *id. Ibis*, 1888, p. 351 (Liakoff Isl.); *id. B. Jap. Emp.* p. 252 (N. Japan) (1890); *Brandt, J. f. O.* 1891, p. 269 (Sitka).

Fuligula (Clangula) glacialis, *Bp. Syn.* p. 395 (1828).

Pagonetta glacialis, *Kaup, Natürl. Syst.* p. 66 (1829).

Clangula hiemalis, *Brehm, Isis*, 1830, p. 999, n. 1; *id. Vög. Deutschl.* p. 933 (1821).

Clangula faberi, *Brehm, Isis*, 1830, p. 999, n. 2; *id. Vög. Deutschl.* p. 935 (Greenland) (1831).

Clangula megauros, *Brehm, Isis*, 1830, p. 999, n. 3; *id. Vög. Deutschl.* p. 936 (1831).

Clangula musica, *Brehm, Isis*, 1830, p. 999, n. 4; *id. Vög. Deutschl.* p. 937 (1831).

Clangula brachyrhynchos, *Brehm, Isis*, 1830, p. 999, n. 6; *id. Vög. Deutschl.* p. 938 (1831).

Fuligula (Harelda) glacialis, *Nutt. Man.* ii. p. 453 (1834); *Brandt, Mém. Ac. St. Pétersb.* (6) *Sc. Nat.* vi. 1–2, p. 8 (1848); *Rehnw. Orn. Centralbl.* 1882, p. 17; *id. Vög. zool. Gärt.* p. 47 (1882).

Haralda glacialis, *Ross, App. to Narr. of a sec. Voy., Nat. Hist.* p. xl (1835); *Sw. Class. B.* ii. p. 369 (1837).

Crimonessa glacialis, *Macgill. Man. Brit. B.* ii. p. 186 (1842).

Harelda hiemalis, *Brehm, Vogelf.* p. 386 (1855); *id. Naumannia*, 1855, p. 299.

Harelda faberi, *Brehm, Vogelf.* p. 386 (1855); *id. Naumannia*, 1855, p. 299.

Harelda brachyrhynchos, *Brehm, Vogelf.* p. 386 (1855); *id. Naumannia*, 1855, p. 299.

Harelda megaceros, *Brehm, Vogelf.* p. 387 (1855); *id. Naumannia*, 1855, p. 299.

Harelda musica, *Brehm, ll. cc.* (1855).

Anas (Harelda) glacialis, *Radde, Reis. S. O.-Sibir.* ii. p. 374 (1863).

Melonetta glacialis, *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Meves, J. f. O.* 1875, pp. 433, 434.

Glaucion hyemalis, *Severtz. J. f. O.* 1875, p. 185.

Harelda hyemalis, *Stejn. Pr. U.S. Nat. Mus.* v. p. 38 (1882); *B., B., & R. Water-Birds N. Am.* ii. p. 57 (1884); *Turner, Auk*, 1885, p. 158; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 169 (1885).

Clangula hyemalis, *A. O. U. Check-list N. Am. B.* p. 120, n. 154 (1886); *Turner, Contr. Nat. Hist. of Alaska*, p. 134 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 72 (1887); *Ridgw. Man. N.*

Am. B. p. 106 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Bering I.); *Hatch, B. of Minnes.* p. 67 (1892).

Fuligula hyemalis, *Rchnw. Syst. Verz. Vög. Deutschl.* p. 57 (1889); *id. J. f. O.* 1890, pp. 83, 84; *Mackay, Auk*, 1892, pp. 330–337.

Clangula (Harelda) hyemalis, *Hartert, Kat. Vogelsamml.* p. 233 (1891).

Adult male in winter and spring nuptial dress. Head and neck white; forehead and sides of the head pale sooty grey; on each side of the neck an oval patch, dark brown on the upper part, paler brown on the lower part; mantle, back, rump, and median upper tail-coverts, breast and wings dark brown, almost black; rest of the lower parts, scapulars, and sides of the upper tail-coverts white; sides and flanks with a slight grey tinge; secondaries paler brown than the rest of the wing; under wing-coverts brown-black; central tail-feathers very long and pointed, black, the next feathers blackish brown edged with white, the white increases towards the outer feathers, which are entirely white: nail and basal half of the bill blackish lead-colour, the intermediate part pale pinkish orange: irides reddish brown; legs and feet lead-blue, with the webs and joints blackish. Total length about 22 inches, wing 9, tail 3·5, central rectrices from 7 to 8, culmen 1·15, tarsus 1·25.

Female. Forehead, crown, and back of the neck dark brown; lores, region behind the eyes, throat, and a ring round the neck greyish white; rest of the upper parts dark brown, with pale olive-brown margins to the feathers of the rump, to the scapulars, wing-coverts, and outer web of secondaries; jugulum brown, changing into white on the lower parts; tail greyish brown, with the edges of the feathers whitish; the central feathers are not elongated. Total length about 16 inches.

Young in first plumage resemble adult females, but the brown parts are paler and the white ones less white.

Young males may be distinguished by the chestnut margins of the scapulars, innermost secondaries, and wing-coverts, and the white on the back of the neck is purer and more clearly defined.

Males in first nuptial dress differ from adults in having shorter central tail-feathers, the dark parts browner, and ash-grey markings on the feathers of the upper back and scapulars.

Males in summer plumage have the sides of the head white, the rest of the head and neck, upper breast, upper back, and scapulars dark brown, the feathers of the upper back and the scapulars having broad, clearly defined chestnut margins; underparts below the breast white, as in nuptial plumage.

Young in down are dark brown on the upper parts and nearly white on the underparts, but the white on the throat nearly meets on the nape, and the brown below it extends in a narrow band across the breast; cheeks dark brown; there is a white spot on the lores, at the base of the upper mandible, and an obscure white mark round the eye.

Hab. Arctic regions; in winter rarely reaching the basin of the Mediterranean in Europe; it winters on the Caspian, and Lake

Baikal, in Northern Japan, and occasionally in China; on the American continent it migrates in winter as far south as the Northern States and the Great Lakes.

a. ♂ ad. sk.	No locality.	Dr. Robertson.
b, *c*. ♂ ad. st.	Great Britain.	P. Meyer, Esq. [P.].
d. Juv. st.	Great Britain.	Sir P. Grey Egerton [P.].
e. ♂ ad. st.	Orkneys.	Old Coll.
f. ♀ juv. sk.	Orkneys, winter (*T. H. Dunn*).	H.J. Elwes, Esq. [P.].
g. ♂ ad. sk.	Graemsay, Orkney, Sept. (*T. H. Dunn*).	Hargitt Coll.
h. ♂ ad. st.	Shetland, winter.	Theodore Fisher, Esq. [P.].
i. ♀ juv. sk.	Scotland, Oct.	R. B. Sharpe, Esq. [P.].
k. ♂ ad. sk.	Edinburgh Market.	Tweeddale Coll.
l. ♂ ad. sk.	Wells, Norfolk, Jan.	Colonel Feilden [P.].
m. ♀ ad. sk.	Yarmouth, Norfolk, Jan. (*Gunn*).	Seebohm Coll.
n. Juv. st.	Devonshire.	Montagu Coll.
o. ♀ imm. sk.	Norway, June (*H. S.*).	Seebohm Coll.
p. ♀ imm. sk.	Norway, July.	Salvin-Godman Coll.
q. ♂ ad. sk.	Bodo, Norway, May.	Salvin-Godman Coll.
r. ♂ ad. sk.	Alexievka, Petchora, June (*H. S.*).	Seebohm Coll.
s. ♂ ad. sk.	Petchora, June (*H. S.*).	Seebohm Coll.
t, *u*. ♀ imm. sk.	Valley of the Yen-e-say, E. Siberia, lat. 69°, July (*H. S.*).	Seebohm Coll.
v, *w*. ♀ ad. et pull. sk.	Schtschutschja, July.	Dr. O. Finsch [C.].
x. ♀ ad. sk.	Bagdad ?	Kenneth Loftus, Esq. [P.].
y. ♂ ad. sk.	Yezo, Japan.	Tweeddale Coll.
z, *a'*. ♂ ♀ ad. sk.	Hakodadi, Japan, Jan., Feb. (*Blakiston*).	Seebohm Coll.
b'. ♂ ad. sk.	Hakodadi, Japan, March (*Henson*).	Seebohm Coll.
c'. ♀ ad. sk.	Hakodadi, Japan, Jan. (*H. Whitely*).	Tweeddale Coll.
d', *e'*. ♂ ad. sk.	N. America (*H. W. Henshaw*).	Salvin-Godman Coll.
f'. ♀ ad. st.	W. side of Rocky Mts.	J. K. Lord, Esq. [P.].
g', *h'*. ♂ ad.* et imm. sk.	N. America (*Dr. Lyall*).	Lord Ampthill [P.].
i', *k'*. ♂ ad. et ♂ juv. sk.	N.W. America.	Capt. Collinson [P.].
l', *m'*. ♂ ♀ ad. sk.	Point Barrow, June.	Salvin-Godman Coll.
n'. ♀ juv. sk.	Kotzebue.	Capt. Kellett & Lieut. Wood.
o'–*x'*. ♂ ♀ ad. et juv. sk.	St. Michael's, Alaska, June, Aug., and Oct. (*E. W. Nelson*).	Salvin-Godman Coll.

* ♂ ad. Patch of black on the side of the neck mixed with white and very little developed; cheeks anteriorly to the eyes almost entirely white.

y', *z'*. ♀ ad. sk.	Stewart's Is., Alaska, June, Sept. (*E. W. Nelson*).	Salvin-Godman Coll.
a''. ♂ ad. st.	Northern Expedition.	The Admiralty [P.].
b''. ♂ ad. sk.	Vancouver Island.	Salvin-Godman Coll.
c''. ♂ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
d''. ♂ ad. sk.	Repulse Bay.	Dr. J. Rae [P.].
e'', *f''*. ♂ ♀ ad. sk.	Lat. 82° 26′ 22″, Sept. (*Feilden*).	Voy. H.M.S. 'Alert.'
g''. Pull. sk.	BellotIsland,Aug.(*Feilden*).	Voy. H.M.S. 'Alert.'
h'', *i''*. ♂ ♀ ad. sk.	Discovery Bay, June.	J. Hart, Esq. [C.].
k''. ♀ ad. sk.	Safety Cove, Sept.	Old Coll.
l'', *m''*. ♂ ad. sk.	Greenland.	Hume Coll.
n''. ♂ ad. sk.	Disco.	J. Hart, Esq. [C.].
o'', *p''*, *q''*. ♂ ♀ ad. sk.	Nova Scotia.	Old Coll.
r'', *s''*, *t''*. ♂ ad. et juv. sk.	Labrador.	Seebohm Coll.
u''. ♂ ad. sk.	Bay of Fundy, March (*H. E. Dresser*).	Salvin-Godman Coll.
v''. ♂ ad. sk.	Putnam River (*G. M. Stoney*).	Salvin-Godman Coll.
w''. ♂ ad. sk.	Branbord,Connecticut,Dec. (*A. J. Dayan*).	Salvin-Godman Coll.
x''–*c*³. ♂ ♀ ad. et juv. sk.	NewHaven, Connecticut, Nov. (*C. H. Merriam & A. J. Dayan*).	Salvin-Godman Coll.
*d*³. ♂ ad. sk.	Lake Umbagog, Maine, Oct. (*W. Brewster*).	Salvin-Godman Coll.
*e*³. ♂ ad. sk.	Lyon's Falls, New York (*A. J. Dayan*).	Salvin-Godman Coll.
*f*³. ♂ ad. sk.	Bridgewater,Massachusetts, Nov. (*W. Brewster*).	Salvin-Godman Coll.
*g*³. ♂ ad. sk.	Massachusetts, winter.	Salvin-Godman Coll.
*h*³, *i*³. ♂ ♀ ad. sk.	Chicago, Illinois (*H. W. Henshaw*).	Salvin-Godman Coll.
*k*³. ♀ ad. sk.	Quantico, Virginia, Nov. (*H. W. H.*).	Salvin-Godman Coll.

*l*³. Skeleton.
*m*³. Skull.
*n*³. Sternum.

49. COSMONETTA.

	Type.
Histrionicus (subgen.), *Less. Man. d'Orn.* ii. p. 415 (1828)	C. histrionica.
Cosmonessa, *Kaup, Natürl. Syst.* p. 46 (1829)	C. histrionica.
Cosmonetta, *Kaup, op. cit.* p. 196 (1829) (=Cosmonessa).	
Phlyaconetta (subgen.), *Brandt, Mém. Ac. St. Pétersb.* (6) *Sc. Nat.* vi. p. 9 (1849) (publ. 1847) ..	C. histrionica.
Histrionicus, *G. R. Gr. List Gen. & Subgen. B.* p. 124, n. 2063 (1855)	C. histrionica.
Phylaconetta, *Baird, Birds N. Am.* p. 798 (1858) (=Phlyaconetta, *Brandt*).	

Range. Arctic regions.

1. Cosmonetta histrionica.

Harlequin Duck.

Dusky and Spotted Duck, *Edw. Nat. Hist. B.* ii. pl. 99 (♂) (1745) (Newfoundland).

Little Brown and White Duck, *Edw. op. cit.* iii. pl. 157 (♀) (1750).

Anas torquata *ex* Insula Terræ-novæ, *Briss. Orn.* vi. p. 362 (1760) (*ex Edwards*); *Gerini, Stor. degli Ucc.* v. tav. 580 (1776).

Querquedula Freti Hudsonis, *Briss. op. cit.* vi. p. 469 (1760) (*ex Edwards*, pl. 157).

Anas histrionica, *Linn. S. N.* i. p. 204, n. 35 (♂) (1766); *Forst. Linn. Trans.* lxii. pp. 383, 419 (1772); *Gm. S. N.* i. 2, p. 534, n. 35 (1788); *Lath. Ind. Orn.* ii. p. 849, n. 45 (1790); *Bonn. Enc. Méth.* i. p. 146, pl. 36. f. 2 (♂), pl. 39. f. 2 (♀) (1790); *Pall. Zoogr. Rosso-As.* ii. p. 273 (1811); *Wils. Am. Orn.* viii. p. 139, pl. 72. f. 4 (1814); *Temm. Man. d'Orn.* p. 573 (1815); *Vieill. N. D.* v. p. 111 (1816); *Dum. Dict. Sc. Nat.* vi. p. 381 (1817); *Temm. Man.* 2nd ed. ii. p. 878 (1820); *Licht. Verz. Doubl.* p. 85 (Iceland) (1823); *Less. Tr. d'Orn.* p. 631 (1831); *Temm. Man.* 2nd ed. iv. p. 549 (1840); *Naum. Vög. Deutschl.* xii. p. 199, Taf. 318 (1844); *Schleg. Rev. Crit.* p. cxix (1844); *Temm. & Schleg. Faun. Jap., Aves*, pp. 129, 141 (1850); *Middend. Sibir. Reis.* ii. 2, p. 237 (1853); *Krüper, Naumannia*, 1857, 2, p. 1 (Iceland); *Kittl. Denkw.* ii. p. 347 (1858); *Swinh. P. Z. S.* 1863, p. 324; *Gieb. Thes. Orn.* i. p. 354 (1872); *van Kempen, Bull. Soc. Zool. Fr.* 1889, p. 105 (Dunkerque!).

Anas minuta, *Linn. S. N.* i. p. 204, n. 36 (♀) (1760); *Gm. S. N.* i. 2, p. 534, n. 36 (1788); *Vieill. N. D.* v. pp. 109, 170 (1816); *Dum. Dict. Sc. Nat.* vi. pp. 385, 398 (1817).

Canard à collier de Terre-neuve, *D'Aubent. Pl. Enl.* 798 (♂), 799 (♀) (17—?); *Buff. Hist. Nat. Ois.* ix. p. 250 (1783).

Sarcelle brune et blanche, *Buff. op. cit.* p. 287 (1783).

Arlequin Duck, *Penn. Arct. Zool.* ii. p. 560, n. 490 (1785); *Lath. Syn.* iii. 2, p. 484, n. 37 (1785).

Clangula histrionica, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 564; *Steph. Gen. Zool.* xii. 2, p. 180, pl. 57 (1824); *Flem. Brit. Anim.* p. 120 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 459 (1831); *Jen. Man. Brit. Vert. An.* p. 246 (1835); *Eyt. Cat. Brit. B.* p. 59 (1836); *id. Hist. Rarer Brit. B.* p. 84 (1836); *Gould, B. Eur.* v. pl. 380 (1837); *Bp. Comp. List*, p. 58 (1838); *Eyt. Mon. Anat.* p. 163 (syn. emend.), pl. 15. n. 1 (skeleton) (1838); *Macgill. Man.* ii. p. 184 (1842); *G. R. Gr. List B. Brit. Mus.* iii. p. 145 (1844); *id. Gen. B.* iii. p. 622, n. 4 (1844); *Rchnb. Syn. Av.*, Natatores, t. 74. ff. 107–111, 885 (1845); *Reinh. J. f. O.* 1854, p. 442 (Greenland); *Licht. Nomencl. Av.* p. 103 (1854); *Bp. Compt. Rend.* xxxviii. p. 664 (*Notes Coll. Delattre*, p. 94) (1854); *Reinh. Ibis*, 1861, p. 14 (Greenland); *Whitely, Ibis*, 1867, p. 208 (Hakodadi); *Dyb. & Parr. J. f. O.* 1868, p. 339 (Dauria); *Wright, Ibis*, 1869, p. 254 (Malta!); *Harting, P. Z. S.* 1871, p. 119 (N. Coast of Greenland); *Garrod, P. Z. S.* 1875, p. 154 (trachea); *Swinh. Ibis*, 1876, p. 335 (Kamtschatka), 1877, p. 147 (Japan); *Garrod, P. Z. S.* 1878, p. 479 (treachea); *Blakist. & Pryer, Ibis*, 1878, p. 215; *Seeb. Ibis*, 1879, p. 22; *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 186 (1880), x. p. 99 (1882); *Hartl. J. f. O.* 1883, p. 283 (Alaska); *Tristr. Cat. Coll. B.* p. 47 (1889); *Dubois, Faun. Vert. Bely., Ois.* ii. p. 488, pl. 266 (1892).

Platypus minutus, *Brehm, Lehrb. eur. Vög.* ii. p. 845 (1824).
Platypus histrionicus, *Brehm, l. c.* p. 848 (1824).
Anas (Fuligula) histrionica, *Bp. Obs. Nomencl. Wils.* n. 277 (1825).
Fuligula histrionica, *Bp. Ann. Lyc. N. Y.* ii. p. 394 (1826); *id. Syn.* p. 394 (1828); *id. Isis*, 1832, p. 1190; *Aud. Orn. Biogr.* iii. p. 612 (1835), v. p. 617 (1839); *id. Syn.* p. 294 (1839); *Selys-L. Faun. Belg.* p. 147 (1842); *Aud. B. Amer.* vi. p. 374, pl. 409 (1843); *De Kay, N. Y. Zool.* ii. p. 331 (1844); *Giraud, B. Long Isl.* p. 336 (1844); *Degl. Orn. Eur.* ii. p. 451 (1849); *Sclat. P. Z. S.* 1865, p. 618 (Hakodadi); *Schleg. Mus. P.-B.*, Anseres, p. 22 (1866); *Przew. Putesch. Ussur.* n. 208 (1867); *Palmén, J. f. O.* 1876, p. 58 (? Finland); *Seeb. Ibis*, 1882, p. 384 (Archangel); *id. Hist. Brit. B.* iii. p. 594, pl. 65 (egg) (1885); *id. B. Japan. Emp.* p. 253 (1890); *Rchnw. J. f. O.* 1890, p. 84; *Brandt, J. f. O.* 1891, p. 269.
Anas (Histrionicus) histrionica, *Less. Man. d'Orn.* ii. p. 415 (1828).
Cosmonessa histrionica, *Kaup, Natürl. Syst.* p. 46 (1829).
Cosmonetta histrionica, *Kaup, Natürl. Syst.* p. 196 (1829); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Dress. B. of Eur.* vi. pp. 609, 613 (1877); *Sclat. P. Z. S.* 1880, p. 527; *Salv. Cat. B. Strickl. Coll.* p. 538 (1882); *B. O. U. List Brit. B.* p. 132 (1883); *Saund. in Yarrell's Hist. Brit. B.* iv. p. 452 (1884–85); *Tuck, Zoolog.* 1887, p. 70; *Saund. P. Z. S.* 1887, p. 319 (Farne Isl.); *Gigl. & Salvad. ibid.* p. 591 (Olga Bay); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. pp. 119 (Corea), 131 (Japan) (1888); *Saund. Ibis*, 1891, p. 184 (Switzerland).
Fuligula (Clangula) histrionica, *Nutt. Man. Orn. U.S. and Canada*, ii. p. 448 (1834).
Harelda histrionica, *K. & B. Wirbelth. Eur.* pp. lxxxvii, 230 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 74 (1842); *Finsch, Abh. Brem. Ver.* iii. p. 67 (Alaska) (1872); *Tacz. J. f. O.* 1873, p. 110, 1874, p. 337, 1875, p. 257 (Ussuri); *id. Orn. Faun. Vost. Sibir.* p. 71 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 47 (1877); *id. J. f. O.* 1878, p. 433 (Holstein); *id. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883).
Fuligula (Phlyaconetta) histrionica, *Brandt, Mém. Ac. St. Pétersb.* (6) *Sc. Nat.* vi. p. 9 (1849) (publ. 1847).
Anas histrionis, *Middend. Sibir. Reis.* ii. 2, pl. xxii. f. 3 (pullus) (1853).
Clangula torquata, *Brehm, Vogelf.* p. 385 (1855); *id. Naumannia*, 1855, p. 299.
Histrionicus histrionicus, *G. R. Gr. List Gen. & Subgen. B.* p. 124 (1855); *id. Hand-list*, iii. p. 87, n. 10700 (1871); *Boucard, Cat. Av.* p. 60 (1876); *Turner, Auk*, 1885, p. 158; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 166 (1885); *A. O. U. Check-list N. Am. B.* p. 121, n. 155 (1886); *Turner, Contr. N. H. Alaska*, p. 134 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 74 (1887); *Ridgw. Man. N. Am. B.* p. 107 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Commander I.); *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Hatch, B. of Minnes.* p. 68 (1892).
Histrionicus torquatus, *Bp. Compt. Rend.* xliii. p. 651, n. 150 (1856); *Baird, B. N. Am.* p. 799 (1858); *id. Cat. N. Am. B.* n. 596 (1859); *A. Newt. Ibis*, 1859, pp. 162–166; *Coop. & Suckl. N. H. Wash. Terr.* p. 260 (1860); *Wheat. Ohio Agr. Rep.* no. 256 (1860); *Ross, Canad. Natural.* vii. p. 153 (April, 1862); *id. Nat. Hist. Rev.* (2) i. p. 288 (1862); *Verr. Pr. Ess. Inst.* iii. p. 158

(1862); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 130 (Bay of Fundy) (1862); *Blakist. Ibis*, 1863, p. 149 (Br. N. Am.); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Brown, Ibis*, 1868, p. 426 (Vancouver I.); *Turnb. B. E. Pa.* p. 46 (1868); *Dall & Bann. Tr. Chic. Ac.* 1869, p. 298 (Yukon, breeding); *Gould, B. of Great Brit.* v. pl. 32 (1869); *Coues, Key N. Am. B.* p. 291 (1872); *id. Check-list*, n. 510 (1873); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 5 (1873); *Ridgw. Ann. Lyc. N. Y.* x. p. 390 (Lake Michigan) (1874); *Coues, B. N.-West*, p. 578 (1874); *id. in Elliott's Alask. Affairs*, p. 191 (1875); *Dress. B. of Eur.* vi. pl. 442 (1877); *Coues, Bull. Geol. & Geogr. Surv.* iv. n. 3, p. 653 (Dakota & Montana) (1878); *Elliott, Monogr. Seal-Isl.* p. 130 (1881).

Histrionicus torquatus, *a.* minuta, *Bp. Compt. Rend.* xliii. p. 651 (1856).

Anas (Harelda) histrionica, *Schrenck, Reis. Amurl.* i. p. 483 (1860); *Radde, Reis. S. O.-Sibir.* ii. p. 374 (1863) (Baikal).

Bucephala (Histrionicus) histrionica, *G. R. Gr. Hand-list*, iii. p. 87, n. 10700 (1871).

Histrionicus minutus, *Dress. B. of Eur.* vi. p. 613 (1877); *Coues, Bull. Nutt. Orn. Club*, v. p. 101 (1880); *Ridgw. Nom. N. Am. B.* n. 622 (1881); *Coues, Check-list*, 2nd ed. p. 115, n. 730 (1882); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 120 (Labrador); *Merriam, Bull. Nutt. Orn. Club*, viii. p. 220 (1883) (Newfoundland); *Nelson, Cruise 'Corwin,'* p. 98 (1883); *B., B., & R. Water-B. N. Am.* ii. p. 52 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 707 (1884); *Nehrl. J. f. O.* 1885, p. 147 (Illinois).

Bucephala histrionica, *Bolau, J. f. O.* 1880, p. 132 (Askold), 1888, p. 46.

Fuligula (Cosmonetta) histrionica, *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 47 (1882).

Adult male. General plumage of a bluish slate or plumbeous colour, almost black on the neck, rump, upper and under tail-coverts; from the base of the culmen over the crown to the occiput a black band, margined anteriorly with white, posteriorly with chestnut on each side; at the base of the bill a broad patch of white; a spot on the ear-coverts and a band on the sides of the neck white; round the lower part of the neck a white collar, margined with black, incomplete anteriorly; on the sides of the breast a crescentic white band, margined with black anteriorly and posteriorly; a white band along the middle of the scapulars; abdomen greyish brown; flanks chestnut; a white spot just at the base of the under tail-coverts, on each side; wings dark slaty grey; secondaries dark metallic blue, forming the speculum; the inner secondaries broadly white, margined with black on the outer web; a white subapical band at the tip of the greater wing-coverts, and a few hidden white round spots on the anterior median wing-coverts; under wing-coverts and axillaries dusky grey; tail slaty black: bill deep lead-blue, the nail lighter; iris dark brown; legs brown, the webs blackish. Total length about 17·50 inches, wing 8, tail 4·5, culmen 1·2, tarsus 1·35.

Female. Upper parts dark brown, with an olivaceous tinge; a whitish patch in front and below the eyes; another on the ear-

coverts; wings and tail blackish; underparts brown, but the edges of the feathers whitish, producing a mottled appearance; lower flanks brown-olive; under tail-coverts with a rusty tinge. Total length about 13·5 inches, wing 6·75, tail 3·5, culmen 1, tarsus 1·2.

Young males are slightly darker than female on the upper parts.

Males in first nuptial dress are mottled with white on the chin and throat, the belly is suffused with brown, and there is scarcely any chestnut on the flanks, and the white on the scapulars is very restricted.

Males in moulting dress resemble the females, but show a large whitish patch on the anterior part of the sides of the head, extended even under the eyes; there are traces of the chestnut bands on the sides of the crown posteriorly; some black feathers among the brown of the neck, a narrow white band on the sides of the nape; a few white feathers edged with black on the sides of the breast (*Mus. Turin*).

Young in down have the upper parts dark brown; underparts white, but the brown extending slightly on the breast and flanks, a pair of white spots on the sides of the rump, and a second pair on the wings; a whitish spot above and anteriorly to the eyes; throat white, abruptly defined from the brown upper half of the head.

Hab. Iceland, accidentally in Europe: Northern North America, south in winter to the Middle States and California; North-eastern Asia, south in winter to Japan; west of Lake Baikal; is reported to breed in the Ural.

a, b. ♂ ♀ ad. st.	Iceland.	Purchased.
c. ♂ ad. sk.	Iceland.	H. J. Elwes, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Amoorland (*Dr. Middendorff*).	Seebohm Coll.
f. ♂ ad. sk.	Kurile Islands (*O. Snow*).	Seebohm Coll.
g. ♂ ad. sk.	Japan.	Tweeddale Coll.
h. ♂ ad. sk.	Hakodadi, Japan, June.	Seebohm Coll.
i. ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
k, l. ♀ ad. et ♂ juv. sk.	Yezo, Japan.	Tweeddale Coll.
m. ♀ ad. sk.	S. Yezo, Japan, Nov. (*Blakiston*).	Seebohm Coll.
n. Juv. sk.	Kegiktowik, Alaska, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
o, p, q. ♂ ♀ ad. et ♂ imm. sk.	St. Michael's, Alaska, June–Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
r. ♂ ad. sk.	W. coast of Alaska, June (*J. W. Johns*).	Salvin-Godman Coll.
s. ♂ ad. sk.	Fort MacPherson, near Alexander R., June.	Salvin-Godman Coll.
t, u. ♂ ♀ ad. st.	Columbia R.	Sir E. Belcher [P.].
v. ♂ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
w. ♂ ad. sk.	Vancouver Island.	Salvin-Godman Coll.
x. ♂ ad. sk.	St. Juan Island, March.	Dr. Lyall [P.].
y, z. ♂ ♀ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].

a'. ♂ juv. sk.	Liskenasset, Greenland (*Müller*).	Hargitt Coll.
b'–e'. ♂ ♀ ad. sk.	Greenland.	Hume Coll.
f'. ♀ ad. sk.	Labrador.	Gould Coll.
g'. ♂ ad. sk.	Labrador.	Seebohm Coll.
h', i'. ♂ ♀ ad. sk.	Bay of Fundy, Nov. (*H. E. Dresser*).	Salvin-Godman Coll.
k'. ♂ ad. sk.	Hudson's Bay.	Hudson Bay Company [P.].
l'. Juv. sk.	Chief Mountain Lake, Aug.	Dr. E. Coues [C.].
m'. ♀ ad. sk.	49th Parallel.	N. America Boundary Comm. [P.].
n', o'. ♂ ♀ ad. sk.	Godbout, Canada, April, May (*N. A. Comeau*).	Salvin-Godman Coll.
p'. ♂ ad. sk.	Canada.	Govt. of Canada [P.].
q'. ? ♀ ad. sk.	Maine, Feb. (*M. Hardy*).	Salvin-Godman Coll.
r', s'. ♂ ad. et ♂ juv. sk.	Hancock Co., Maine, Jan., Feb. (*M. Hardy*).	Salvin-Godman Coll.
t'. Skeleton.	Greenland.	M. Müller [C.].
u', v'. Sterna.	Europe.	M. Lefebvre [C.].

w'. Trachea with larynx.

50. ŒDEMIA.

Type.

Oidemia, *Fleming, Phil. of Zool.* ii. p. 260 (1822) .. Œ. nigra.

Melanitta, *Boie, Isis*, 1822, p. 564..... Œ. nigra.

Ania, *Leach in Mus. Brit., fide Steph. Gen. Zool.* xii. 2, p. 212 (1824).

Maceranas (subgen.), *Less. Man. d'Orn.* ii. p. 414 (1828) ..... Œ. fusca?

Macrorhamphus (subgen.), *Less. op. cit.* p. 414 (1828) ..... Œ. perspicillata.

Pelionetta, *Kaup, Natürl. Syst.* p. 107 (1829) . .. Œ. perspicillata.

Œdemia, *Strickl. Ann. & Mag. N. H.* vii. p. 39 (1841).

Melanonetta, *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872) (nomen emend. =*Melanitta*).

Range. Confined to Northern Hemisphere.

Cf. Mackay, G. H., "The Scoters (*Oidemia americana*, *O. deglandi*, and *O. perspicillata*) in New England" (Auk, viii. pp. 279–290, 1891). Trumbull, G., "Our Scoters" (Auk, ix. pp. 153–160, 1892). Mackay, G. H., "The Spring Migration of the Scoters in 1892" (*l. c.* pp. 292–294).

Key to the Species.

a. Length of commissure much less than inner toe without claw; bill of adult male much swollen on top at base; wing without white speculum (Œdemia).

a'. Nail of bill much flattened, scarcely hooked at tip. *Adult male*: Bill black, with a yellow or orange spot or band on culmen in front of the basal knob, or even extended along the middle of it. *Adult female*:

Above sooty brown, beneath paler; bill wholly dusky, the basal half of the culmen level, or scarcely if at all elevated at base . *nigra*, p. 401.

b'. Nail of bill less flattened, somewhat arched, and hooked at tip. *Adult male*: Basal half of upper mandible, including whole knob, yellow or orange; rest, including entire edge, black. *Adult female*: Above dusky greyish brown, the feathers of dorsal region with paler tips; bill uniform blackish ..... *americana*, p. 404.

b. Length of commissure much more than length of inner toe without claw.

c'. Feathering of head advancing farther forward on lores than on forehead; wing with a white speculum (MELANETTA).

c''. Loral feathers separated from nostril by a space nearly or quite equal to length of nostril. *Adult male*: Lower part of swollen basal portion of upper mandible on sides unfeathered; basal portion of culmen elevated, but not forming an abrupt knob; plumage black, also on the flanks. *Adult female*: Sooty greyish, or dusky greyish brown, darker above; no white on head ..... *fusca*, p. 406.

d''. Loral feathering separated from nostrils by a space much narrower than length of nostril. *Male* with swollen lateral base of upper mandible entirely feathered.

d'''. Lateral outlines of bill convex; knob of the *male* with anterior outline sloping backwards; plumage black, but flanks olive-brown ..... *deglandi*, p. 409.

e'''. Lateral outlines of bill nearly parallel; knob of *male* very high, with anterior outline concave and the upper one horizontal, the top forming a conspicuous projection; plumage black, no olive-brown colour on flanks..... *carbo*, p. 411.

d'. Feathering of head advancing much farther forward on forehead than on lores; sides of bill at base with swollen portion entirely naked; wing without speculum (PELIONETTA). *Adult male*: Uniform deep black, but a patch on the top of the head and another on the hind neck pure white (one or the other of them occasionally absent); bill reddish in life, the swollen base, on each side, marked with a large black spot. *Adult female*: Resembles the females of *Œ. fusca, deglandi,* and *carbo,* but easily distinguished by the different feathering on head, by the naked swellings at the base of the sides of the bill, and by the much darker black colour of the upper part of the head..... *perspicillata*, p. 412.

1. Œdemia nigra.

Common Scoter.

Whilk, *Lister, Phil. Trans.* xv. p. 1160, n. 4 (1685).

Anas nigra, *Briss. Orn.* vi. p. 420, pl. xxxviii. f. 2 (1760).

Anas nigra, *Linn. S. N.* i. p. 196, n. 7 (1766); *Gm. S. N.* i. 2, p. 508, n. 7 (1788); *Lath. Ind. Orn.* ii. p. 848, n. 43 (1790); *Bonn. Enc. Méth.* i. p. 139, pl. 35. f. 4 (1790); *Temm. Man.* p. 554 (1815); *Leach, Cat. M. & B. Brit. Mus.* p. 39 (1816); *Vieill. N. D.* v. p. 123 (1816); *Dum. Dict. Sc. Nat.* vi. p. 347 (1817); *Temm. Man.* 2nd ed. ii. p. 856 (1820); *Licht. Verz. Doubl.* p. 85 (1823); *Bp. Specch. Comp.* p. 72, n. 229 (1827); *Less. Man. d'Orn.* ii. p. 414 (1828); *id. Tr. d'Orn.* p. 630, n. 25 (part.) (1831); *Temm. Man.* 2nd ed. iv. p. 543 (part.) (1840); *Eichw. Faun. Caspio-Cauc.* p. 43 (1841); *Schleg. Rev. Crit.* p. cxvii (1844); *Naum. Vög. Deutschl.* xii. p. 108, Taf. 312 (1844); *Middend. Sibir. Reis.* ii. p. 236 (Boganida) (1853); *Martin, J. f. O.* 1853, p. 208; *Gieb. Thes. Orn.* i. p. 358 (1872).

? Anas cinerea, *S. G. Gmel. Reisen*, ii. p. 184, tab. 17 (1774); *Bechst. Gem. Nat. Deutschl.* ii. p. 660, no. 15 (1791).

Black Diver or Scoter, *Penn. Brit. Zool.* ii. p. 584, n. 273 (1776): *Lath. Syn.* iii. 2, p. 480, n. 36 (1785).

Macreuse, *D'Aubent. Pl. Enl.* 978 (♂) (17— ?); *Buff. Hist. Nat. Ois.* ix. p. 234, pl. 16 (1783).

Weissbackenente, *Naum. Naturg. d. Land- u. Wasserv.* iii. p. 374, t. 70. ff. 91 (♀), 92 (♂ juv.) (1799); *Bechst. Taschenb.* ii. p. 445 (Anm.) (1803), iv. p. 590 (1812).

Anas cinerascens, *Bechst. Orn. Taschenb.* ii. p. 437 (1803); *id. Naturg. Deutschl.* iv. p. 1025 (1809); *Temm. Man. d'Orn.* p. 555 (1815); *Vieill. N. D.* v. p. 116 (1816); *id. Enc. Méth.* i. p. 358, n. 107 (1825) (cf. *Naum. Vög. Deutschl.* xii. p. 108, 1844).

Anas atra, *Pall. Zoogr. Rosso-As.* ii. p. 247 (1811) (Caspian).

Oidemia nigra, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Steph. Gen. Zool.* xii. 2, p. 213 (1824); *Flem. Brit. An.* p. 119 (1828); *Sw. Class. B.* ii. p. 368 (1837); *Gould, B. Eur.* v. pl. 378 (1837); *Bp. Comp. List*, p. 58, n. 421 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvi, 228 (1840); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 140 (1844); *id. Gen. B.* iii. p. 625, n. 1 (1844); *Rchnb. Syn. Av.*, Natatores, t. 81. ff. 141–144 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 307, n. 1792 (1849); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Bp. Compt. Rend.* xliii. p. 651, n. 131 (1856); *Loche, Cat. Mamm. et Ois. Algér.* p. 143 (1858); *Powys, Ibis*, 1860, p. 354 (Ionian Isl.); *Gould, B. of Great Brit.* v. pl. 28 (pt. 11, 1862); *Nordm. J. f. O.* 1864, p. 378 (Finland and Lapland); *Degl. & Gerbe, Orn. Eur.* ii. p. 560 (1867); *G. R. Gr. Hand-list*, iii. p. 89, n. 10710 (1871); *Salvad. Faun. d'Ital., Ucc.* p. 269 (1872); *Fritsch, J. f. O.* 1872, p. 372 (Bohemia); *Bogdan. Säugeth. u. Vög. der m. u. unt. Wolga* (Russ.), p. 151; *Radde, Ornis Caucas.* p. 459 (1884) (Caspian ?); *Dub. Faun. Vert. Belg., Ois.* ii. p. 500, pl. 270 (1892); *Collett, Nyt Mag. f. Naturv.* xxxv. p. 294 (1894).

Melanitta nigra, *Boie, Isis*, 1822, p. 564, n. 395; *Brehm, Isis*, 1830, p. 998, n. 4; *id. Vög. Deutschl.* p. 903 (1831); *Eyt. Mon. Anat.* p. 145, pl. 12. f. 1 (œsophagus, proventriculus, stomach, and trachea), f. 2 (cæca) (1838); *Eyt. Syn. Anat.* p. 102 (1869).

Platypus niger, *Brehm, Lehrb. Naturg. eur. Vög.* p. 820 (1824); *Schilling, J. f. O.* 1853, p. 377; *Böck, J. f. O.* 1854, p. 309.

Fuligula nigra, part., *Bp. Ann. Lyc. Nat. Hist. N. Y.* ii. p. 390 (1826); *Savi, Orn. Tosc.* iii. p. 127 (1831); ? *Nutt. Man.* ii. p. 423 (Coast of United States) (1834); *Degl. Orn. Eur.* ii. p. 470 (1849); *Brandt, Nordl. Ural, etc.* ii. p. 71 (Kara Sea) (1856); *Schleg. Mus. P.-B.*, Anseres, p. 18 (1866); *Palmén, J. f. O.* 1876, p. 57 (Finland); *Seeb. Hist. Brit. B.* iii. p. 602, pl. 65 (egg) (1885); *Brandt, J. f. O.* 1880, p. 249 (St. Petersburg).

Melanitta nigripes, *Brehm, Isis*, 1830, p. 998, n. 1; *id. Vög. Deutschl.* p. 901 (1831).

Melanitta megauros, *Brehm, Isis*, 1830, p. 998, n. 2; *id. Vög. Deutschl.* p. 902 (1831).

Melanitta gibbera, *Brehm, Isis*, 1830, p. 998, n. 3; *id. Vög. Deutschl.* p. 902 (1831).

Œdemia nigra, *Bp. Cat. Met. Ucc. Eur.* p. 73, n. 448 (1842); *Licht. Nomencl. Av.* p. 103 (1854); *Brehm, Vogelf.* p. 383 (1855); *More, Ibis*, 1865, p. 445 (breeding in Scotland); *Godm. Ibis*, 1866, p. 102 (Azores?); *Droste, J. f. O.* 1866, p. 390 (Borkum); *Tristr. Ibis*, 1868, p. 328 (Palestine?); *Smith, ibid.* p. 456 (Portugal); *Godm. Nat. Hist. Azores*, p. 37 (1870); ? *Gillett, Ibis*, 1870, p. 308 (Novaya Zemlya?); *Elw. & Buckl. ibid.* p. 340 (Albania); *Saund. Ibis*, 1871, p. 397 (S. Spain); *Heugl. Ibis*, 1872, p. 64 (Nova Zemlia and Waigatsch); *id. J. f. O.* 1872, p. 123; *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Alst. & H.-Brown, Ibis*, 1873, p. 71; *Irby, Orn. Str. Gibr.* p. 205 (1875); *Seeb. & H.-Brown, Ibis*, 1876, p. 447 (Lower Petchora); *Blanf. East. Pers.* ii. p. 303 (1876); *Dress. B. of Eur.* vi. p. 663, pl. 449 (1877); *Finsch, Ibis*, 1877, pp 58, 59, 61; *Seeb. Ibis*, 1879, p. 160 (Siberia); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 153 (W. Siberia); *Sclat. P. Z. S.* 1880, p. 528; *Gigl. Ibis*, 1881, p. 215 (Italy); *Sclat. P. Z. S.* 1882, p. 134 (?); *Seeb. Ibis*, 1882, p. 229 (Astrakhan); *Salv. Cat. B. Strickl. Coll.* p. 540 (part.) (1882); *Seeb. Ibis*, 1883, p. 35 (Caspian?); *Irby, ibid.* p. 189 (Santander); *B. O. U. List Brit. B.* p. 135 (1883); *Sclat. List Vert. An.* 8th ed. p. 441 (1883); *Chapm. Ibis*, 1884, p. 70 (Guadalquivir); ? *Tristr. Faun. & Flor. of Palest.* p. 118 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 88 (note) (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 472 (1884–85); *Chapm. Ibis*, 1885, p. 173 (Lapland); *Salvad. El. Ucc. Ital.* p. 267 (1886); *Tait, Ibis*, 1887, p. 378 (Portugal); *Ridgw. Man. N. Am. B.* p. 111 (1887); ? *Guillem. Ibis*, 1889, p. 215 (Cyprus); *Tristr. Cat. Coll. B.* p. 47 (1889); *Lydekk. Ibis*, 1891, p. 391 (? fossil); *Rchnw. J. f. O.* 1890, pp. 83, 84; *Hartert, Kat. Vogelsamml.* p. 233, n. 3444 (Egypt!) (1891); *Sharpe, Cat. Osteol Specim.* iii. p. 308 (1891); *Lilford, Col. Fig. Br. B.* pt. xii. pl. — (1892); *Fowler, Zoolog.* 1892, p. 151 (nesting in Sussex); *Saund. Ibis*, 1893, p. 256; *Pears. & Bidw. Ibis*, 1894, p. 233 (N. Norway).

Oidemia gibbera, *Brehm, Vogelf.* p. 383 (1855); *id. Naumannia*, 1855, p. 298.

Oidemia nigripes, *Brehm, Vogelf.* p. 383 (1855); *id. Naumannia*, 1855, p. 298.

Oidemia megaurus, *Brehm, Vogelf.* p. 383 (1855); *id. Naumannia*, 1855, p. 298.

Somateria nigra, *Selys-L. Patria Belg.* i. p. 277 (1873).

Fuligula (Oedemia) nigra, *Rchnw. Orn. Centralbl.* 1882, p. 17; *id. Vög. zool. Gärt.* p. 48 (1882).

Oidema nigra, *Olphe-Gall. Contr. Faun. Orn. Eur. Occ.* fasc. iii. p. 22 (1888).

Adult female. Entire plumage velvety black, with a dark purple gloss on head and neck and a greenish one on the back; underparts rather duller, with a brownish tinge; bill black, except a yellow patch on the culmen round the nostrils, the base swollen into a roundish bulb; iris dark brown; legs and feet brownish black, darkest on the webs. Total length about 20 inches, wing 9·5, tail 5·2, culmen 1·9, tarsus 1·5.

Female. Dark brown, paler below, the feathers with lighter edges; sides of the head and of the upper part of the neck and throat dull grey, with a brownish tinge; bill without the bulb at the base, only slightly swollen towards the base of the upper mandible, dull black in colour.

Young. Resembles the female, but it is duller and rather more uniform in colour, and much more white on the abdomen.

A *young male* resembles the female, but has many black feathers.

Males in moulting-dress are unknown.

Young in down are unspotted dark brown on the upper parts and across the breast; throat white; belly greyish brown; bill blackish plumbeous; legs olivaceous.

Hab. Northern parts of the Palæarctic Region, east to the Taimyr Peninsula; winters in the Baltic and on the coasts of Western Europe, occasionally straying as far south as the Azores and the Mediterranean.

a. ♀ ad. st.	Great Britain.	Purchased.
b. ♂ ad. sk.	London Market, Feb.	Seebohm Coll.
c. ♀ juv. sk.	Aberdeenshire (*W. C. Angus*).	H. J. Elwes, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Caithness, June.	Colonel Irby and Capt. Reid [P.].
f. ♂ ad. sk.	Holkham Bay, Norfolk, Feb.	Capt. Feilden [P.].
g. ♂ ad. sk.	Yarmouth, Norfolk, Dec.	H. J. Elwes, Esq. [P.].
h. ♂ juv. sk.	Hickling, Norfolk, March.	Baron A. von Hügel [P.].
i. ♂ ad. st.	Wales.	Rev. A. Morgan [P.].
k. ♂ ad. st.	Somersetshire.	Hon. W. C. Fitzmaurice [P.].
l, m. ♂ ad. st. et ♀ juv. sk.	Somersetshire.	Montagu Coll.
n. ♂ ad. st.	Kingsbury Reservoir.	J. E. Harting, Esq. [P.].
o, p. ♂ ♀ ad. sk.	Cambridge Market, Feb., Nov.	Salvin-Godman Coll.
q. ♂ juv. sk.	Devonshire, Jan.	E. Reynolds, Esq. [P.].
r. ♀ juv. sk.	Fowey, Cornwall, Aug.	Dr. Günther [P.].
s. ♀ juv. sk.	Southampton Water, Jan.	R. E. Coles, Esq. [P.].
t. Juv. sk.	Hythe, Nov.	H. J. Elwes, Esq. [P.].
u. ♀ imm. sk.	Tangier.	F. J. Favier, Esq. [P.].
v. ♀ imm. sk.	Tangier (*Olcessi*).	Shelley Coll.
w. ♀ juv. sk.	Tunis.	L. Fraser [C.].
x. ♂ juv. sk.	Archangel.	R. B. Sharpe, Esq. [P.].
y. ♀ ad. sk.	Petchora.	Seebohm Coll.

z, *a'*. ♂ juv. et pull. sk.	Petchora River.		Colonel Feilden [P.].
b', *c'*. ♀ ad. et pull. sk.	Schtschutschja, Siberia, July.	W.	Dr. O. Finsch [C.].

2. Œdemia americana.

Anas nigra, *Wils.* (*nec Linn.*) *Amer. Orn.* viii. p. 135, pl. 72 (1814); *Bp. Specch. Comp.* p. 72, n. 249 (1827); *Temm. Man. d'Orn.* 2nd ed. iv. p. 543 (part., Japan) (1840).

Anas (Fuligula) nigra, *Bp. Obs. Nomencl. Wils.* n. 267 (1825).

Fuligula nigra, part., *Bp. Ann. Lyc. Nat. Hist. N. Y.* ii. p. 390 (1826); *id. Syn.* p. 390 (1828).

Petite Macreuse, *Less. Tr. d'Orn.* p. 630, n. 26 (1831) (Newfoundland); *Pucher. Rev. et Mag. de Zool.* 1850, p. 635 (=Œ. americana); *Hartl. J. f. O.* 1855, p. 420.

Oidemia americana, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 450 (1831); *Bp. Comp. List*, p. 58, n. 386 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 140 (1844); *id. Gen. B.* iii. p. 625, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 81. f. 140 (1845); *Bp. Compt. Rend.* xxxviii. p. 664 (*Not. Coll. Delattre*, p. 944) (1854); *id. Compt. Rend.* xliii. p. 651, n. 132 (1856); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Baird, B. N. Am.* p. 807 (1858); *id. Cat. N. Am. B.* n. 604 (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 231; *Coop. & Suckl. N. H. Wash. Terr.* p. 263 (1860); *Verr. Pr. Ess. Inst.* iii. p. 159 (1862); *Blakist, Ibis*, 1863, p. 149 (Hudson's Bay); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 562 (observ.) (1867); *Dall & Bann. Tr. Chic. Ac. Sc.* i. p. 300 (1869); *G. R. Gr. Hand-list*, iii. p. 89, n. 10711 (1871); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883); *Nehrl. J. f. O.* 1885, p. 148 (Illinois); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 174 (Commander Isl.) (1885); *Turner, Contr. N. H. of Alaska*, p. 137 (1886); *A. O. U. Check-list N. Am. B.* p. 123, n. 163 (1886); *Ridgw. Man. N. Am. B.* p. 111, n. 163 (1887); *Nelson, Nat. Hist. Coll. in Alaska*, p. 80, pl. v. f. 4 (head) (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 138 (1887); *Mackay, Auk*, 1891, p. 279; *Trumbull, Auk*, 1892, p. 153; *Hatch, B. of Minnes.* p. 69 (1892).

Fuligula (Oidemia) americana, *Nutt. Man.* ii. p. 422 (1834).

Melanitta americana, *Eyt. Mon. Anat.* p. 144 (1838); *id. Syn. Anat.* p. 101 (1869).

Fuligula americana, *Aud. Orn. Biogr.* v. p. 117, pl. 408 (1839); *id. Syn.* p. 290 (1839); *id. B. Am.* vi. p. 343, pl. 403 (1843); *DeKay, N. Y. Zool.* ii. p. 336 (1844); *Giraud, B. Long Isl.* p. 330 (1844); *Rchnb. Syn. Av.*, Natatores, t. 80. ff. 2761–62 (1850) (*ex Audubon*); *Schleg. Mus. P.-B.*, Anseres, p. 19 (1866); *Seeb. B. Jap. Emp.* p. 248 (1890).

Œdemia americana, *Pucher. Rev. et Mag. de Zool.* 1850, p. 635; *Hartl. J. f. O.* 1855, p. 420; *Kirkby, cf. Ibis*, 1862, p. 308; *Swinh. Ibis*, 1863, p. 435 (Yangtse); *id. P. Z. S.* 1863, p. 324; *Brown, Ibis*, 1868, p. 426 (Vancouver I.); *Coues, Pr. Ess. Inst.* v. p. 201(1868); *id. Pr. Bost. Soc. N. H.* xii. p. 125 (1868); *Turnb. Birds E. Pa.* p. 37 (1869); *Swinh. P. Z. S.* 1871, p. 419; *Coues, Pr. Ac. Philad.* 1871, p. 27; *Finsch, Abh. Brem. Ver.* iii. p. 68 (1872); *Coues, Key*, p. 293, n. 512 (1872); *id. Check-list*, n. 516 (1873); *Swinh.*

Ibis, 1873, p. 367 (Aleutian Isl.); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 6 (1873); *Coues, B. N.-West*, p. 581 (1874); *Dress. B. of Eur.* vi. p. 667 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 215 (Japan); *Adams, ibid.* p. 432 (Michalaski); *Seeb. Ibis*, 1879, p. 23 (Hakodate); *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 187 (1880); *Sclat. P. Z. S.* 1880, p. 529; *Ridgw. Nom. N. Am. B.* n. 630 (1881); *Coues, Check-list*, 2nd ed. p. 116, n. 737 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 100 (1882) (Kurile Isl., breeding); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 121 (Labrador); *Nelson, Cruise 'Corwin,'* p. 102 (1883); *Blakist. Amend. List B. Jap.* p. 9 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 89 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 713, n. 737 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 474 (1884–85); *Turner, Auk*, 1885, p. 158 (Nearer Isl., Alaska); *Matschie & Ziemer, J. f. O.* 1885, p. 192; *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 131 (Yamada, Japan) (1888); *Tristr. Cat. Coll. B.* p. 47 (1889).

Œdemia nigra, part., *Swinh. P. Z. S.* 1863, p. 324 (Japan); *Salv. Cat. B. Strickl. Coll.* p. 540 (specim. *a*, Pennsylvania) (1882).

[Oidemia] minor, *Less. fide G. R. Gr. Hand-list*, iii. p. 89 (*in syn.* O. americanæ) (1871).

Anas wilsoni, *Gieb. Thes. Orn.* i. p. 365 (1872).

Œdemia nigra, var. americana, *Ridgw. Ann. Lyc. N. Y.* x. p. 390 (1874) (Lake Michigan); *Dub. Faun. Vert. Belg., Ois.* ii. p. 500 (1892).

Fuligula (Œdemia) americana, *Rchnw. Orn. Centralbl.* 1882, p. 17.

Fuligula nigra americana, *Seeb. Hist. Brit. B.* iii. p. 602 (1885).

Similar to *Œ. nigra*, but nail of bill distinctly arched and decidedly hooked at the tip.

Adult male. Similar to the male of *Œ. nigra*, but basal half of upper mandible, including whole of knob, "light yellow or canary-yellow, richly dyed at the sides with scarlet vermilion, deeply at and near the nostrils, and lightly towards the base; irides deep brown; feet dark brown, shaded with black, webs black" (*Trumbull*). Total length 17–21·50 inches, wing 8·75–9·50, culmen 1·65–1·80, tarsus 1·65–2·00.

Female. Above dusky greyish brown; the feathers of the back with paler tips; lower parts paler greyish brown, the lighter tips broader but wanting on the posterior portions; lateral and under-parts of head nearly uniform light greyish brown, in decided contrast with dark brown of pileum and nape (*Ridgway*): "bill black or blackish, irregularly marked with yellow; feet warm olive-brown, shaded with black on the inner side; webs black" (*Trumbull*).

Young in autumn. Resembles the female, but light part of head considerably lighter; throat pale buff or dull whitish; lower surface of the body very pale, approaching whitish, and faintly spotted with the brown or greyish brown of the fore breast and posterior region; bill greyish black (*Trumbull*).

Young in down. Apparently indistinguishable from the same stage of *Œ. nigra*.

Hab. North America and North-eastern Asia; in America breeding in the north, in winter migrating south to New Jersey, the

Great Lakes, and California; in Asia breeding in the Kuriles, in winter south to Japan.

a–d. ♂ ♀ ad. et imm. sk. et st.	N. America.	Hudson's Bay Co. [P.].
e. ♂ ad. sk.	Repulse Bay.	Dr. J. Rae [P.].
f. ♂ ad. sk.	Nova Scotia.	Capt. Blakiston [P.].
g, h, i. ♂ ♀ ad. sk.	Lyon's Falls, New York, Sept. (*A. J. Dayan*).	Salvin-Godman Coll.
k. ♂ juv. sk.	Branford, Connecticut, Nov. (*A. J. Dayan*).	Salvin-Godman Coll.
l. Juv. sk.	Chicago, Illinois (*H. W. Henshaw*).	Salvin-Godman Coll.
m–v. ♂ ♀ ad., juv., et pull. sk.	St. Michael's, Alaska, June, Aug., Sept., Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
w, x. ♂ ♀ ad. sk.	Aleutian Is. (*Vosnesensky*).	Seebohm Coll.
y, z. ♂ ad. sk.	Hokodadi, Japan, Feb., March (*Henson & Blakiston*).	Seebohm Coll.
a', b'. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.

3. Œdemia fusca.

Velvet Scoter.

Anas nigra major, *Briss. Orn.* vi. p. 423 (1760).

Anas fusca, *Linn. S. N.* i. p. 196, n. 6 (1766); *Gm. S. N.* i. 2, p. 507, n. 6 (1788); *Lath. Ind. Orn.* ii. p. 848, n. 44 (1790); *Bonn. Enc. Méth.* i. p. 140, pl. 36. f. 1 (♂), pl 31. f. 4 (♀) (1790); *Lath. Tr. Linn. Soc.* iv. p. 119, t. xv. ff. 3–7 (trachea) (1798); *Temm. Man. d'Orn.* p. 552 (1815); *Vieill. N. D.* v. p. 124 (1816); *Dum. Dict. Sc. Nat.* vi. p. 348 (1817); *Temm. Man. d'Orn.* 2nd ed. ii. p. 854 (1820); *Bp. Specch. Comp.* p. 72, n. 228 (1827); *Less. Man. d'Orn.* ii. p. 414 (1828); *Yarr. Tr. Linn. Soc.* xvi. 2, p. 321, pl. xxi. ff. 2, 3 (trachea) (1830); *Less. Tr. d'Orn.* p. 630 (1831); *Temm. Man. d'Orn.* iv. p. 543 (1840); *Schleg. Rev. Crit.* p. cxvii (1844); *Naum. Vög. Deutschl.* xii. p. 123, Taf. 313 (1844); *Schrader, J. f. O.* 1853, pp. 242, 318 (Lapland); *Brehm, J. f. O.* 1854, p. 84 (Egypt); *Müller, J. f. O.* 1856, p. 232 (Provence); *Holtz, J. f. O.* 1868, p. 129 (Gottland), pp. 146, 160, 164 (Gottska-Sandö); *Gieb. Thes. Orn.* i. p. 352 (part.) (1872).

Velvet Duck, *Penn. Brit. Zool.* p. 583, n. 272, pl. 96 (1776); *id. Arct. Zool.* ii. p. 555, n. 482 (1785); *Lath. Syn.* iii. 2, p. 482, n. 37 (1785).

Grande Macreuse, *D'Aubent. Pl. Enl.* 956 (♂) (17—?).

Canard brun, *D'Aubent. Pl. Enl.* 1007 (♀) (17—?); *Buff. Hist. Nat. Ois.* ix. p. 252 (1783).

Double Macreuse, *Buff. Hist. Nat. Ois.* ix. p. 242 (1783).

Anas notata, *Bodd. Tabl. Pl. Enl.* p. 58, n. 1007 (1783).

Anas fuliginosa, *Bechst. Naturg. Deutschl.* iv. p. 962, Taf. xxxvi. f. 1 (1809); *cf. Naum. V. D.* xii.p. 123 (note).

Anas carbo, part., *Pall. Zoogr. Rosso-As.* ii. p. 244 (1811).

Oidemia fusca, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Steph. Gen. Zool.* xii. 2, p. 216 (1824); *Flem. Brit. An.* p. 119 (1828); *Thomps. P. Z. S.* 1835, p. 79 (Ireland); *Jen. Man.* p. 239 (1835); *Eyt. Cat. Brit. B.* p. 58 (1836); *Gould, B. Eur.* v. pl. 377 (1837); *Bp. Comp. List*, p. 57, n. 420 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvi, 228 (1840); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr.*

List B. Brit. Mus. iii. p. 141 (part.) (1844); *id. Gen. B.* iii. p. 623, n. 3 (1844); *Rchnb. Syn. Av.*, Natatores, t. 81. ff. 137-139 (1845); *id. Av. Syst. Nat.* p. viii, t. viii. (1852); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Sclat. P. Z. S.* 1860, p. 442 (Zool. Gard.); *Nordm. J. f. O.* 1864, p. 378 (Finland and Lapland); *Salvad. J. f. O.* 1865, p. 326 (Sardinia); *De Fil. Viaggio in Pers.* p. 342 (1865) (Lake Gotksha); *Gould, B. Great Brit.* v. pl. 29 (1867); *Degl. & Gerbe, Orn. Eur.* ii. p. 562 (1867); *Collett, Norg. Fugle*, p. 67 (1868); *Müller, J. f. O.* 1869, p. 347 (Faroe); *Droste, Vogelw. Borkum's*, p. 309 (1869); *Collett, Orn. Bemærkn.* 1871, p. 217; *Meves, Œfv. K. Vet.-Ak. Förh.* 1871, p. 783 (Archangel); *Salvad. Faun. d'Ital., Ucc.* p. 269 (1872); *Fritsch, J. f. O.* 1872, p. 372 (Bohemia); *Fischer, J. f. O.* 1872, p. 390 (St. Petersburg); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1347 (1873); *De Fil. J. f. O.* 1876, p. 189 (Lake Gotksha); *Reinh. Vid. Med. Nat. For. Kjöbenh.* 1879–80, p. 7 (S. Greenland); *Radde, Ornis Caucas.* p. 459 (1884); *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881–92, p. 293 (1894).

Melanitta fusca, *Boie, Isis*, 1822, p. 564, n. 396, 1826, p. 980; *Brehm, Isis*, 1830, p. 998; *id. Vög. Deutschl.* p. 905 (1831); *Eyt. Mon. Anat.* p. 147 (part.), pl. i. f. 2 (trachea) (1838); *id. Syn. Anat.* p. 104 (1869); *G. R. Gr. Hand-list*, iii. p. 89, n. 10714 (1871); *Garrod, P. Z. S.* 1875, p. 154 (trachea), 1878, p. 479.

Platypus fuscus, *Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 822 (1824); *Schilling, J. f. O.* 1853, p. 378; *Schütt, J. f. O.* 1861, p. 239.

Fuligula fusca, part., *Bp. Ann. Lyc. N. Y.* ii. p. 390 (1826); *id. Syn.* p. 390 (part.) (1828); *Savi, Orn. Tosc.* iii. p. 126 (1831); *Bp. Isis*, 1832, p. 1188 (part., Italy); *Degl. Orn. Eur.* ii. p. 472 (1849); *Schleg. Mus. P.-B.*, Anseres, p. 16 (part.) (1866); *Severtz. Turkest. Jevotn.* p. 70 (1870); *Palmén, J. f. O.* 1876, p. 58 (Finland); *Brandt, J. f. O.* 1880, p. 249 (St. Petersburg); *Seeb. Hist. Brit. B.* iii. p. 605 (part.), pl. 65 (egg) (1885); *id. B. Japan. Emp.* p. 250 (part.), fig. p. 251 (head) (1890).

Melanitta hornschuchii, *Brehm, Isis*, 1830, p. 998, n. 1; *id. Vög. Deutschl.* p. 904 (1831).

Melanitta megapus, *Brehm, Isis*, 1830, p. 998, n. 3; *id. Vög. Deutschl.* p. 906 (1831).

Melanitta platyrhynchos, *Brehm, Isis*, 1830, p. 998, n. 4; *id. Vög. Deutschl.* p. 907 (1831).

Melanetta fusca, *Bp. Icon. Avif. Ital., Ucc. Introd.* p. 17 (1841); *id. Compt. Rend.* xliii. p. 651, n. 129 (1856); *Loche, Cat. M. et O. Algér.* p. 143 (1858); *B., B., & R. Water-B. N. Am.* ii. pp. 93, 97 (part.) (1884).

Œdemia fusca, *Bp. Cat. Met. Ucc. Eur.* p. 73, n. 447 (1842); *Rüpp. Syst. Uebers.* p. 138, n. 500 (1845) (Egypt); *Rep. Counc. Z. S.* 1853, p. 16 (Zool. Gard.); *Licht. Nomencl. Av.* p. 103 (1854); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Heugl. Syst. Ueb.* p. 67 (1856); *Droste, J. f. O.* 1866, p. 391 (Borkum); ? *Tacz. J. f. O.* 1870, p. 312 (Dauria); *Goebel, J. f. O.* 1871, p. 25 (N. Russia); *Heugl. Ibis*, 1872, p. 64; *id. J. f. O.* 1872, p. 123 (Novaja Semlja u. Wigatsch); *Shell. B. of Egypt*, p. 292 (1872); *Alst. & H.-Brown, Ibis*, 1873, p. 71; *Brooke, ibid.* p. 345 (Sardinia); *Danf. & H.-Brown, Ibis*, 1875, p. 428 (Transylvania); *Dress. Ibis*, 1876, p. 420; *Seeb. & H.-Brown, Ibis*, 1876, p. 448 (Lower Petchora); *Blanf. East. Pers.* ii. p. 302 (1876); *Dress. B. of Eur.* vi. p. 657,

pl. 448 (1877); *Finsch, Ibis*, 1877, pp. 58, 59, 61; *id. Verh. z.-b. Ges. Wien*, 1879, p. 153 (W. Siberia); *Seeb. Ibis*, 1880, p. 194 (Yen-e-sai); *Sclat. P. Z. S.* 1880, p. 529; *Gigl. Ibis*, 1881, p. 215 (Italy); *Salv. Cat. B. Strickl. Coll.* p. 540 (1882); *Seeb. Ibis*, 1882, p. 229 (Astrakan), 1883, p. 189 (Caspian?); *Irby, ibid.* p. 189 (Santander); *B. O. U. List Brit. B.* p. 135 (1883); *Saund. in Yarrell's Hist. Brit. B.* iv. p. 476 (1884–85); *Salvad. El. Ucc. Ital.* p. 267 (1886); *Tristr. Cat. Coll. B.* p. 47 (1889); *Rchnw. J. f. O.* 1890, pp. 83, 84; *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 308 (1891); *Lilford, Col. Fig. Brit. B.* pt. xxii. pl. — (1892).

Œdemia hornschuchii, *Brehm, Vogelf.* p. 383 (1855); *id. Naumannia*, 1855, p. 299.

Œdemia megapus, *Brehm, Vogelf.* p. 383 (1855); *id. Naumannia*, 1855, p. 299.

Œdemia platyrhynchos, *Brehm, Vogelf.* p. 384 (1855); *id. Naumannia*, 1855, p. 299.

Fuligula (Œdemia) fusca, *Rchnw. Orn. Centralbl.* 1882, p. 17; *id. Vög. zool. Gärt.* p. 48 (1882).

Melanonetta fusca, *Heine & Rchnw. Nomencl. Mus. Hein. Orn.* p. 349 (1890).

Hybrid.

Œdemia fusca × Clangula glaucion, *Leverk. J. f. O.* 1890, pp. 222, 223.

Adult male. General plumage uniform velvet-black; eyelids and a small patch under each eye white; secondaries and tips of the greater wing-coverts white, forming a conspicuous band across the wing: beak pale orange, based and edged with black, a diagonal line of the same black colour running from each nostril to the nail of the beak; irides chalk-white; legs and toes dull crimson-red, membranes nearly black. Total length 22 inches, wing 11·20, tail 4·25, culmen 1·9, tarsus 1·15.

Female. General colour of the plumage brown-grey, the breast and abdomen lighter, the edges of the feathers being whitish; feathers of the back and scapulars have pale edges; two whitish spots on each side of the head, one near the base of the upper mandible, the other on the auricular region; secondary quills white, as in the male: bill brown; irides brown; legs and feet paler than in the male.

Young in first plumage resemble adult females.

Males in first nuptial dress have the black of the plumage less glossy.

Males in moulting dress resemble the females, but are somewhat darker and show some black feathers.

Young in down differ from those of the Common Scoter in having a white spot on the wings, and in being whiter on the belly.

Hab. Northern Palæarctic Region, as far east as Western Siberia, south in winter to the coasts of northern and temperate Europe, to the Black Sea and the Caspian; occasional in Greenland.

a. ♂ ad. sk.	Orkneys.	H. J. Elwes, Esq. [P.].
b. ♂ juv. st.	Great Britain.	Purchased.
c, *d*, *e*. ♂ ad. et juv. sk.	St. Andrews, Fifeshire, Jan. (*R. G. W. R.*).	Tweeddale Coll.
f, *g*. ♂ ad. st.		Purchased.
h. Juv. st.	Abbeville, France.	M. Baillon [C.].
i. Pull. sk.	Volga.	Gould Coll.
k. ♀ ad. sk.	Schtschutschja, W. Siberia, July.	Dr. O. Finsch [C.].
l. ♂ ad. st.	? N. America.	Hudson's Bay Co.
m. Skeleton.		Zool. Soc.
n, *o*, *p*. Sterna with shoulder-girdles.		M. Lefebvre's Coll.
q. Trachea with larynx.		

4. Œdemia deglandi.

Anas fusca, *Wils.* (*nec Linn.*) *Am. Orn.* viii. p. 137, pl. 72 (1814); *Bp. Specch. Comp.* p. 72, n. 248 (1827); *Less. Tr. d'Orn.* p. 630 (part.) (1831); *Gieb. Thes. Orn.* i. p. 352 (part.) (1872).

Anas (Fuligula) fusca, *Bp. Obs. Nomencl. Wilson*, n. 266 (1825).

Fuligula fusca, part., *Bp. Ann. Lyc. N. Y.* ii. p. 390 (1826); *id. Syn.* p. 390 (1828); *id. Isis*, 1832, p. 1188 (part.); *Aud. Orn. Biogr.* iii. p. 454, pl. 247 (1835); *id. Syn.* p. 289 (1839); *id. B. Am.* vi. p. 332, pl. 401 (1843); *DeKay, N. Y. Zool.* ii. p. 337 (1844); *Gir. B. Long Isl.* p. 328 (1844); *Wied, J. f. O.* 1859, p. 178; *Schleg. Mus. P.-B.*, Anseres, p. 17 (part.) (1866).

Oidemia fusca, *Sw. & Rich.* (*nec Linn.*) *Faun. Bor.-Am.* ii. p. 449 (1831); *Bp. Comp. List*, p. 57, n. 385 (1838); *G. R. Gr. List B. Brit. Mus.* p. 141 (part.) (1844); *Turnb. Birds E. Pa.* p. 37 (1869); *Coues, Key N. Am. B.* p. 294, n. 517 (1872).

Fuligula (Oidemia) fusca, *Nutt. Man.* ii. p. 419 (1834).

Melanitta fusca, part., *Eyt. Mon. Anat.* p. 147 (1838).

Fuligula bimaculata, *Herbert, Field Sports*, 2nd ed. ii. p. 366, with fig. (immature) (1848).

Double Macreuse d'Amérique, *Degl. Orn. Eur.* ii. p. 474 (1849).

Oidemia deglandi, *Bp. Rev. Crit.* p. 108 (1850); *id. Compt. Rend.* xxxviii. p. 664 (*Not. Coll. Delattre*, p. 94) (part.) (1854); *Degl. & Gerbe, Orn. Eur.* ii. p. 863 (1867); *A. O. U. Check-list N. Am. B.* p. 124, n. 165 (1886); *Ridgw. Man. N. Am. B.* p. 112 (1887); *Mackay, Auk*, 1891, p. 279; *Trumbull, Auk*, 1892, pp. 157–160; *Mackay, ibid.* p. 305; *Hatch. B. of Minnes.* p. 70 (1892).

Oidemia velvetina, *Cass. Pr. Acad. Philad.* v. p. 126 (Dec. 1850) (Atl. coast of N. Am.).

Melanetta deglandi, *Bp. Compt. Rend.* xliii. p. 651, n. 130 (1856).

Melanetta velvetina, *Baird, B. N. Am.* p. 805 (1858); *id. Cat. N. Am. B.* n 601 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 262 (1860); *Wheat. Ohio Agric. Rep.* no. 258 (1860) (Lake Erie); *Coues, Pr. Acad. Philad.* 1861, p. 239; *Ross, Canad. Natur.* vii. p. 153 (McKenzie) (1862); *id. Nat. Hist. Rev.* (2) vii. p. 288 (1862); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Boardm. Pr. Bost. Soc.* ix. p. 130 (1862); *Blakist. Ibis*, 1863, p. 149 (part., Brit. N. America); *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Brown, Ibis*, 1868, p. 426 (Vancouver Isl.); *Coues, Pr. Ess. Inst.* v. p. 200 (1868); *id. Pr. Bost. Soc. N. H.* xii. p. 125 (1868); *Ridgw. Ann.*

Lyc. N. Y. x. p. 300 (1874) (Lake Michigan); *Ridgw. Nom. N. Am. B.* n. 632 (1881); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 121 (Labrador); *B., B., & R. Water-B. N. Am.* ii. p. 93 (1884); *Nehrl. J. f. O.* 1885, p. 148 (Illinois).

Oidemia (Pelionetta) bimaculata, *Baird, B. N. Am.* p. 808 (1858).

Melanitta deglandii, part., *G. R. Gr. Hand-list*, iii. p. 89, n. 10715 (1871).

Œdemia fusca, var. (?), *Coues, Key*, p. 294 (1872); *id. Check-list*, no. 517 (1873); *id. B. N.-West*, p. 581 (1874).

Œdemia fusca, *b.* velvetina, *Coues, B. N.-West*, p. 582 (1874).

Œdemia velvetina, *Sclat. P. Z. S.* 1880, p. 529.

Œdemia fusca, *Coues* (*nec Linn.*), *Check-list*, 2nd ed. p. 116, n. 738 (1882); *id. Key N. Am. B.* p. 714, n. 738 (1884).

Fuligula (Œdemia) velvetina, *Rchnw. Orn. Centralbl.* 1882, p. 17.

Fuligula fusca velvetina, *Seeb. Hist. Brit. B.* iii. p. 605 (1885); *id. B. Jap. Emp.* p. 251 (fig. of the head) (1890).

Adult male. Similar to *Œ. fusca*, but the white mark under the eyes more extended and the flanks olive-brown: the base of the culmen much higher, and the feathering at the base of the bill much more extended, the loral feathering being separated from nostrils by a space much narrower than length of nostril; male with swollen lateral base of upper mandible entirely feathered, so that the feathers come down nearly to the edge of upper mandible; width of bill at widest part equal to or greater than distance from nostril to tip, the lateral outlines strongly convex; knob with anterior outline sloping backward; distance from frontal feathering to where outline of knob begins to incline downward not more than 0·45; colour of bill, in life, orange-red. Length 19·75–23·00 inches, wing 10·65–11·40, culmen 1·40–1·70, tarsus 1·80–2·10.

Female. Similar to that of *Œ. fusca*, but easily to be recognized by the space separating the loral feathers being narrower than the nostrils.

Hab. North-eastern North America; south in winter to Chesapeake Bay and the Great Lakes.

a, b. ♂ imm. sk.	N. America.	Hudson's Bay Co. [P.].
c. ♂ juv. sk.	Massachusetts (*H. W. Henshaw*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Branford, Connecticut, Aug. (*A. J. Dayan*).	Salvin-Godman Coll.
e–h. ♂ ad. et ♂ juv. sk.	New Haven, Connecticut. Oct., Nov. (*C. H. Merriam & A. J. D.*).	Salvin-Godman Coll.
i. Imm. sk.	Chicago, Illinois, Nov. (*E. W. Nelson*).	Salvin-Godman Coll.
k. ♀ imm. sk.	Big Island, Gt. Slave Lake.	B. R. Ross, Esq. [P.].
l. ♂ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
m. ♂ ad. sk.	Salt Spring Island.	Dr. Lyall [P.].
n. ♂ ad. sk.	Vancouver Island.	Old Coll.

5. Œdemia carbo.

Anas carbo, part., *Pall. Zoogr. Rosso-As.* ii. p. 244 (1811) (Kamtschatka); ? *Bp. Compt. Rend.* xxxviii. p. 664 (*Not. Coll. Delattre*, p. 94) (1854).

Anas fusca, part., *Temm. Man. d'Orn.* 2nd ed. iv. p. 543 (1840) (Japan); *Midd. Sibir. Reis.* ii. p. 236 (1853) (South coast of Ochotsk sea); *Kittl. Denkw.* i. p. 260 (1858) (Sitka); *Homey. J. f. O.* 1870, p. 432 (E. Siberia).

Oidemia deglandi, part., *Bp. Compt. Rend.* xxxviii. p. 664 (*Not. Coll. Delattre*, p. 94) (1854) (specim. from California?); *Stejn.* (*nec Bp.*) *Orn. Expl. in the Comm. Isl. and Kamtschatka*, p. 174 (1885) (Kamtschatka, Bering I.); *A. O. U. Check-list N. Am. B.* p. 124 (1886) (partim? specim. from California?); ? *Turner, Contr. N. H. of Alaska*, p. 137 (1886) (Aleutian Islands, St. Michael's, Unalaska); ? *Nelson, Nat. Hist. Coll. in Alaska*, p. 81 (1887) (Alaska, Lower Yukon, Sitka); *Gigl. & Salvad. P. Z. S.* 1887, p. 590 (Possiette Bay and Japan); *Schal. J. f. O.* 1891, p. 268 (Sitka).

? Oidemia carbo, *Cass. U.S. Expl. Exped., Mamm. & Orn.* p. 344 (1858) (Oregon, California).

Anas (Oidemia) fusca, *Radde, Reis. S. O.-Sibir.* ii. p. 373 (1863) (Mongolia, E. Mandshuria, Port May).

Melanetta velvetina, *Blakist. Ibis*, 1863, p. 149 (Yangtsze); *Dall & Bann.* (*nec Cass.*) *Tr. Chic. Acad.* i. p. 300 (1869) (Yukon, Sitka); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 6 (1873); *Ridgw. Pr. U.S. Nat. Mus.* vii. p. 68 (1884) (Alaska).

Œdemia americana, *Swinh.* (*nec Sw.*) *Ibis*, 1863, p. 435 (Yang-tsze); *id. P. Z. S.* 1863, p. 324, 1871, p. 419.

Fuligula fusca, part., *Schleg. Mus. P.-B.*, Anseres, p. 16 (1866) (specimens 14, 15 from Japan); *Seeb. B. Jap. Emp.* p. 250 (part.) (1890); *Brandt, J. f. O.* 1891, p. 268 (Sitka).

Œdemia fusca, *Swinh.* (*nec Linn.*) *P. Z. S.* 1863, p. 324 (Amoorland); *Whitely* (*nec Linn.*), *Ibis*, 1867, p. 208 (Hakodadi); *Swinh. P. Z. S.* 1871, p. 419; *Finsch, Abh. Ver. Brem.* iii. p. 69 (1872); *Swinh. Ibis*, 1873, p. 367 (China); ? *Dyb. J. f. O.* 1873, p. 110 (E. Siberia); ? *Heugl. J. f. O.* 1874, p. 402 (Shanghai); *Swinh. Ibis*, 1874, p. 424 (Chefoo), 1875, p. 457 (Hakodadi); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 48 (1877) (E. Siberia); *id. Orn. Faun. Yost. Sibir.* p. 71 (1877); *David & Oust. Ois. Chine*, p. 504 (1877); *Blakist. & Pryer, Ibis*, 1878, p. 25 (Yezo, Sendai); *id. Trans. As. Soc. Jap.* x. p. 100 (1882) (Japan, Kuriles); *Blakist. Chrysanth.* 1883, p. 27; *Blakist. Amend. List B. Jap.* p. 9, n. 52 (1884); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 176 (1885); *Nelson, N. H. Coll. in Alaska*, p. 23 (1887) (*cf. Ibis*, 1889, p. 249); *Styan, Ibis*, 1891, pp. 328, 497 (Nankin).

Œdemia velvetina, part., *Finsch, Abh. Ver. Brem.* iii. p. 68 (1872) (Alexandrovsk); *Swinh. Ibis*, 1875, p. 457 (Yang-tsze); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 101 (1882) (Yang-tsze); *Styan, Ibis*, 1891, pp. 328, 498.

Melanetta fusca, *Nelson* (*nec Linn.*), *Cruise 'Corwin,'* p. 102 (1883) (Bering Str., Kotzebue Sound); *Ridgw. Pr. U.S. Nat. Mus.* vii. p. 68 (1884) (Alaska); *B., B., & R. Water-B. N. Am.* ii. pp. 93, 97 (part.) (1884); *Matschie u. Ziemer, J. f. O.* 1885, p. 192 (Unalaska, Norton Sound).

Oidemia stejnegeri, *Ridgw. Man. N. Am. B.* p. 112 (1887) (Kamt-

schatka, Japan); *Stejn. Pr. U.S. Nat. Mus.* x. p. 138 (1887) (Commander Islands); *Gigl. & Salvad. P. Z. S.* 1887, p. 592 (note); *Salvad. & Gigl. Mem. R. Ac. Sc. Tor.* (2) xxxix. p. 119 (Possiette Bay), p. 132 (Japan) (1888).

Fuligula fusca stejnegeri, *Seeb. B. Jap. Emp.* pp. 250 (figure of the head), 252 (1890).

Adult male. Similar to the male of *Œ. deglandi*, but black of the plumage usually much more intense, and white mark under the eye more extended backwards on the temporal region; knob on the culmen much more elevated, and with anterior outline decidedly concave, the top forming a more or less conspicuous projection; distance from frontal feathers along top of knob to anterior extremity not less than 0·55; sides of bill bright red in life.

Female. Similar to the female of *Œ. deglandi*, but the line of the frontal feathering almost transverse, not forming an angle protruding anteriorly; in that respect resembles the female of *Œ. fusca*, from which it differs in the feathering of the loral region descending lower than the nostril.

Hab. North-eastern Asia, south in winter to Japan and China; ? North-western America, south in winter to California.

(There are no adult specimens from Alaska in the British Museum, so that I am unable to decide whether Alaskan birds really belong to *Œ. carbo*.)

a, b. ♂ ♀ ad. sk.	Amoor-land (*R. Maack*).	Seebohm Coll.
c. ♂ ad. sk.	China.	Purchased.
d. ♂ ad. st.	Shanghai, China.	F. Webb, Esq. [P.].
e–h. ♂ ♀ ad. et juv. sk.	Shanghai, China, March (*R. Swinhoe*).	Seebohm Coll.
i. Juv. sk.	Foochow, Jan.	
k. Imm. sk.	Kurile Island (*O. Snow*).	Seebohm Coll.
l, m. ♂ ♀ ad. sk.	Hakodadi, Japan, Feb. (*Blakiston*).	Seebohm Coll.
n, o. ♂ ♀ imm. sk.	Hakodadi, Japan, Dec., Jan. (*H. Whitely*).	Gould Coll.
p. ♂ ad. sk.	Nagasaki, Japan.	Gould Coll.
q. (?) Juv. sk.	St. Michael's, Alaska, Oct. (*E. W. Nelson*).	Salvin-Godman Coll.

6. Œdemia perspicillata.

The Great Black Duck from Hudson's Bay, *Edw. Birds*, iii. p. & pl. 155 (1749).

Anas nigra major Freti Hudsonis, *Briss. Orn.* vi. p. 425 (1760).

Anas perspicillata, *Linn. S. N.* i. p. 201, n. 25 (1766); *Forst. Phil. Trans.* lxii. p. 417 (1772); *Gm. S. N.* i. 2, p. 524, n. 25 (1788); *Lath. Ind. Orn.* ii. p. 847, n. 42 (1790); *Bonn. Enc. Méth.* i. p. 138, pl. 37. f. 1 (1790); *Wils. Am. Orn.* viii. p. 49, pl. 67 (1814); *Vieill. N. D.* v. p. 124 (1816); *Dum. Dict. Sc. Nat.* vi. p. 349 (1817); *Temm. Man. d'Orn.* 2nd ed. ii. p. 853 (1890); *Bp. Specch. Comp.* p. 72, n. 250 (1827); *Less. Tr. d'Orn.* p. 630 (1831); *Temm. op. cit.* iv. p. 542 (1840); *Naum. Vög. Deutschl.* xii. p. 140, Taf. 314 (1844); *Schleg. Rev. Crit.* p. cxvii (1844); *Blas. Naumannia*, 1858, p. 316 (Heligoland) (1859); *id. in Naum. Vög. Deutschl.* xiii.

p. 312 (egg) (1860); *id. Ibis*, 1862, p. 72 (Heligoland); *Gieb. Thes. Orn.* i. p. 359 (1872).

Canard du Nord, apellé le Marchand, *D'Aubent. Pl. Enl.* 995 (17—?).

Macreuse à large bec, *Buff. Hist. Nat. Ois.* ix. p. 244 (1783).

Anas latirostris, *Bodd. Tabl. Pl. Enl.* p. 58, n. 995 (1783).

Black Duck, *Penn. Arct. Zool.* ii. p. 556, n. 483 (1785); *Lath. Syn.* iii. 2, p. 479, n. 35 (1785).

Melanitta perspicillata, *Boie, Isis*, 1822, p. 564; *Eyt. Mon. Anat.* p. 146 (1838); *Eyt. Syn. Anat.* p. 103 (1869).

Platypus perspicillatus, *Brehm, Lehrb. Nat. eur. Vög.* ii. p. 823 (1824).

Oidemia perspicillata, *Steph. Gen. Zool.* xii. 2, p. 219 (1824); *Flem. Br. An.* p. 119 (1828); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 449 (1831); *Jard. & Selb. Ill. Orn.* iii. pl. cxxxv. (1835); *Jen. Man.* p. 240 (1835); *Eyt. Cat. Brit. B.* p. 59 (1836); *id. Hist. of Rar. Brit. B.* p. 81 (1836); *Sw. Class. B.* ii. p. 368 (1837); *Gould, B. Eur.* v. pl. 376 (1837); *Bp. Compt. List*, p. 57 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvi, 228 (1840); *Macgill. Man.* ii. p. 181 (1842); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 141 (1844); *id. Gen. B.* iii. p. 625, n. 4 (1844); *Gosse, B. Jam.* p. 408 (1847); *Hartl. Arch. f. Naturg.* 1852, i. p. 122 (1852); *Bp. Compt. Rend.* xliii. p. 664 (1853) (California); *Newb. Pr. R. R. Rep.* vi. p. 104 (1857); *Nilss. Skandin. Faun.* (ed. 1858) p. 465; *Cass. U.S. Explor. Exped., Mamm. & Orn.* p. 344 (1858); *Heerm. Pr. R. R. Rep.* x. pt. iv. p. 70 (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 230; *Reinh. Ibis*, 1861, p. 14 (Greenland); *Nordm. J. f. O.* 1864, p. 378; *Degl. & Gerbe, Orn. Eur.* ii. p. 563 (1867); *Gould, B. of Great Brit.* v. pl. 30 (1867); *Turnb. Birds E. Pa.* p. 37 (1869); *Müll. J. f. O.* 1869, p. 347 (Faroe?); *Coues, Pr. Philad. Acad.* 1871, p. 27; *id. Key N. Am. B.* p. 294, n. 518 (1872); *Harting, Br. B.* p. 162 (1872) (Great Britain); *Feild. Zoology.* 1872, p. 3255 (Faeroe, accidental); *Reinh. Vidensk. Medd. Kjöbenh.* 1881, p. 183 (Greenland); *Turner, Contr. Nat. Hist. of Alaska*, p. 137 (1886) (Yukou and Aleutian Isl.); *A. O. U. Check-list N. Am. B.* p. 124, n. 166 (1886); *Ridgw. Man. N. Am. B.* p. 113 (1887); *Nelson, Nat. Hist. Coll. in Alaska*, p. 81, pl. v. f. 5 (head) (1887) (both shores of Bering Straits, Norton Sound, and Kotzebue Sound); *Mackay, Auk*, 1891, p. 279 (New England); *Hartert, Kat. Vogelsamml.* p. 293 (1891); *Trumb. Auk*, 1892, pp. 157–160; *Dubois, Faun. Vert. Belg., Ois.* ii. p. 506 (1893); *Collett, Christ. Vid.-Selsk. Forh.* 1895 (*Extr.* p. 9) (Norway).

Anas (Fuligula) perspicillata, *Bp. Obs. Wils.* n. 265 (1828).

Fuligula (Oidemia) perspicillata, *Bp. Ann. Lyc. N. Y.* ii. p. 389 (1826); *id. Syn.* p. 389 (1828); *Nutt. Man.* ii. p. 416 (1834).

Anas (Macrorhamphus) perspicillata, *Less. Man. d'Orn.* ii. p. 414 (1828).

Peliouetta perspicillata, *Kaup, Natürl. Syst.* p. 107 (1829); *Rchnb. Syn. Av.*, Natatores, t. 82. ff. 905–907 (1845); *id. Av. Syst. Nat.* p. viii (1852); *Bp. Compt. Rend.* xliii. p. 651, n. 128 (1856); *Baird, B. N. Am.* p. 806 (1858); *id. Cat. N. Am. B.* n. 602 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 262 (1860); *Coues, Pr. Philad. Acad.* 1861, p. 239; *Kirkby, cf. Ibis*, 1862, p. 308; *Ross, Canad. Natur.* vii. p. 153 (Mackenzie) (1862); *id. Nat. Hist. Rev.* (2) i. p. 288 (1862); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 130 (1862); *Blakist. Ibis*, 1863, p. 149 (Brit. N. Am.); *Coues, Ibis*, 1866, p. 270; *Lawr. Ann. Lyc. N. Y.* viii. p. 297 (1866); *Baird, Ibis*, 1867, pp. 271, 283, 284,

285; *Brown, Ibis*, 1868, p. 426 (Vancouver); *Coues, Pr. Ess. Inst.* v. p. 200 (1868); *id. Pr. Bost. Soc. N. H.* xii. p. 125 (1868); *Dall & Bann. Tr. Chic. Acad.* i. p. 300 (1869); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Ridgw. Nom. N. Am. B.* n. 633 (1881); *Stearns, Pr. U. S. Nat. Mus.* 1883, p. 121; *Bean, Pr. U. S. Nat. Mus.* v. p. 107 (1883) (Alaska); *B., B., & R. Water-B. N. Am.* ii. p. 98 (1884); *Nehrl. J. f. O.* 1885, p. 148 (Illinois); *Matschie u. Ziemer, ibid*, p. 192; *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 308 (1891).

Fuligula perspicillata, *Bp. Isis*, 1832, p. 1188, n. 333; *Aud. Orn. Biogr.* iv. p. 161, pl. 317 (1838); *id. Syn.* p. 289 (1839); *Selys-L. Faun. Belg.* i. p. 143 (1842); *Aud. B. Am.* vi. p. 337, pl. 402 (1843); *De Kay, N. Y. Zool.* ii. p. 335 (1844); *Giraud, B. Long Isl.* p. 329 (1844); *Degl. Orn. Eur.* ii. p. 474 (1849); *Schleg. Mus. P.-B.*, Anseres, p. 16 (1866); *Palmén, J. f. O.* 1876, p. 58 (Finland); *Seeb. Hist. Brit. B.* iii. p. 607, pl. 65 (egg) (1885); *Brandt, J. f. O.* 1891, p. 268 (Sitka); *Swinh. Ibis*, 1892, p. 27 (Heligoland).

Œdemia perspicillata, *Bp. Cat. Met. Ucc. Eur.* p. 72, n. 446 (1842); *Licht. Nomencl. Av.* p. 103 (1854) (Mexico); *Reinh. J. f. O.* 1854, p. 142 (Greenland); *id. Ibis*, 1861, p. 14 (Greenland); *Albrecht, J. f. O.* 1862, p. 207; *March, Pr. Philad. Acad.* 1864, p. 72; *A. Newt. P. Z. S.* 1867, p. 167 (egg); *Coues, Key*, p. 294 (1872); *id. Check-list*, n. 518 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 130 (1873); *Coues, B. N.-West*, p. 582 (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 402 (Jamaica); *Dress. B. of Eur.* vi. p. 669, pl. 450 (1877); *Sclat. P. Z. S.* 1880, p. 529; *Langton, Zoolog.* 1881, p. 59 (Orkney, trachea); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Coues, Check-list*, 2nd ed. p. 116, n. 739 (1882); *Salv. Cat. B. Strickl. Coll.* p. 540 (1882); *B. O. U. List Brit. B.* p. 136 (1883); *Hartl. J. f. O.* 1883, p. 283 (Alaska); *Coues, Key N. Am. B.* 2nd ed. p. 714, n. 739 (1884); *Thompson, Zoolog.* 1884, p. 29 (Lancashire); *Saund. Yarrell's Hist. Brit. B.* iv. p. 481 (1884–85); *Cory, List B. W. Ind.* p. 31 (1885); *Cory, Auk*, 1888, p. 67 (Jamaica?).

Pelionetta trowbridgii, *Baird, B. N. Am.* p. 806 (1858) (San Diego, California); *id. Cat. N. Am. B.* n. 603 (1859); *id. Ibis*, 1867, p. 271; *Elliot, Ill. B. N. Am., Introd.* p. [xi] (with fig. of the head) (1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 300 (1869); *G. R. Gr. Hand-list*, iii. p. 89, n. 10713 (1871).

Œdemia perspicillata, var. trowbridgei, *Coues, Key*, p. 295 (1872); *id. Check-list*, n. 518 *a* (1873).

Œdemia perspicillata, *b.* trowbridgei, *Coues, B. N.-West*, p. 582 (1874).

Œdemia perspicillata trowbridgii, *Coues, Check-list*, 2nd ed. p. 117, n. 740 (1882); *id. Key N. Am. B.* 2nd ed. p. 715, n. 740 (?) (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 487 (1884–85).

Fuligula (Œdemia) perspicillata, *Rchnw. Orn. Centralbl.* 1882, p. 17; *id. Vög. zool. Gärt.* p. 48 (1882).

Hybrid.

Œdemia sp., *Finsch, Abh. Ver. Brem.* iii. p. 69, n. 82 (1872) (Alexandrovsk); *cf. B., B., & R. Water-B. N. Am.* ii. p. 100 (1884) (?=P. perspicillata×Melanetta fusca *or* velvetina, *potius* Œ. carbo).

Adult male. General colour of the plumage velvety black, a large white patch, almost quadrangular, on the crown, and a still larger

one of a triangular shape on the nape: "upper mandible above at base, including nostrils, dull crimson, this changed to flame-scarlet over the front of the mandible, nail cadmium-yellow, narrowly edged anteriorly with lighter yellow, and sometimes posteriorly with light lavender, sides with large squarish patch of black at base, this separated from the black feathering above it by orange and from the feathering behind by a narrower edging of crimson; beneath this black patch and in front of it as far as anterior edge of nostril, or thereabouts, continuously white, the remainder of the side (anteriorly to the white portion) pure orange; lower mandible-nail like its fellow above; back of this for a short distance reddish flesh-colour, terminating irregularly in white, the white continued to the base, with more or less black on the naked skin between the rami; feet: outer sides of tarsus and toes, excepting inner toe, crimson; the inner side, with both sides of inner toe, orange-chrome, deepening in part to orange-vermilion; joints and other portions blotchily marked with black; webs solidly black" (*Trumbull*). Total length about 21 inches, wing 9·5, tail 3·5, culmen 1·55, tarsus 1·5.

Occasionally in some specimens, apparently fully adult, the white patch on the crown is entirely absent.

Female. Plumage dull brown, lightest about the cheeks; the feathers of the back sometimes show paler tips; lower parts greyish brown, becoming nearly white on the abdomen, the feathers of the breast and sides tipped with the same; vent and under tail-coverts uniform dusky: bill greenish black; iris yellowish white; "feet yellowish orange, webs greyish dusky" (*Audubon*).

Young. Similar to the adult female, but head with two quite distinct whitish patches, one against the lateral base of the bill, the other over the auriculars, behind and below the eye; plumage above more uniform than in the adult female.

Young in first plumage closely resemble adult female, but have traces of the white on the nape.

Young in down appears to be undescribed.

Hab. Northern North America, in winter south to Jamaica, the Carolinas, Ohio River, and Lower California: the Asiatic coast of Bering Straits; accidental in Northern Europe, east as far as Swedish Lapland.

a. ♂ ad. st.	N. America.	Old Coll.
b, c, d. ♂ ad. st. et sk.	N. America.	Hudson's Bay Co. [P.].
e. ♀ juv. sk.	Kotzebue Sound.	Capt. Kellett and Lieut. Wood [P.].
f-k. ♂ ♀ ad. et juv. sk.	St. Michael's, Alaska, June, Aug., Sept. (*E. W. Nelson*).	Salvin-Godman Coll.
l. ♀ juv. sk.	Pt. Constantine, Alaska, Sept.	Salvin-Godman Coll.
m. ♂ ad. sk.	Bear Lake.	B. R. Ross, Esq. [P.].
n. ♂ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
o. ♀ ad. sk.	Big Island.	B. R. Ross, Esq. [P.].
p. ♂ ad. sk.	Repulse Bay.	Dr. Rae.
q. ♂ ad. sk.	Godbout, Canada (*N. A. Comeau*).	Salvin-Godman Coll.

r, s. ♂ ♀ ad. sk.	Bay of Fundy (*H. E. Dresser*).	H. J. Elwes, Esq. [P.].
t, u. ♂ ♀ ad. sk.	Bay of Fundy, April (*H. E. Dresser*).	Salvin-Godman Coll.
v. ♂ juv. sk.	Massachusetts, Sept.	Salvin-Godman Coll.
w. ♂ ad. sk.	Boston, Massachusetts, Sept. (*H. W. Henshaw*).	Salvin-Godman Coll.
x. ♀ juv. sk.	Ipswich Bay, Massachusetts (*C. J. Maynard*).	Salvin-Godman Coll.
y. ♀ ad. sk.	Branford, Connecticut, Nov. (*A. J. Dayan*).	Salvin-Godman Coll.
z. ♀ juv. sk.	Bermudas, Nov.	S. G. Reid, Esq. [C.].
a'. ♂ ad. sk.	Vancouver Island.	Salvin-Godman Coll.
b'. ♂ imm. sk.	Vancouver Island.	Old Coll.
c'. ♂ juv. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
d'. ♂ ad. sk.	St. Juan Island.	Dr. Lyall [P.].
e'. ♀ ad. sk.	Nanaimo, May.	Dr. Lyall [P.].
f'. ♂ ad. sk.	California.	H. J. Elwes, Esq. [P.].
g', h'. ♂ ad. et ♂ juv. sk.	San Diego, California, Dec. (*H. W. Henshaw*).	Salvin-Godman Coll.

51. CAMPTOLÆMUS.

	Type.
Kamptorhynchus, *Eyt. Mon. Anat.* p. 57 (1838) (*nec Cuv.*)	C. labradorius.
Camptorhynchus, *Bp. Comp. List*, p. 58 (1838).	
Camptolaimus, *G. R. Gr. List Gen. B.* ed. 2, p. 95 (1841)	C. labradorius.

Range. Confined to North-eastern America.

1. Camptolæmus labradorius.

Pied Duck, *Lawson, Hist. Carolina*, p. 148?; *Penn. Arct. Zool.* ii. p. 559, n. 488, t. in title (1785); *Lath. Syn.* iii. 2, p. 497, n. 46 (1785); *id. Gen. Hist.* x. p. 318 (1824); *Downs, Pr. & Tr. Nova Scot. Inst.* vi. pt. 4, p. 326 (1886).

Anas labradoria, *Gm. S. N.* i. 2, p. 537, n. 110 (1788): *Bonn. Enc' Méth.* i. p. 132 (1790); *Vieill. N. D.* v. p. 132 (1816); *Gieb. Thes. Orn.* i. p. 355 (1872).

Anas labradora, *Lath. Ind. Orn.* ii. p. 859, n. 67 (1790); *Wils. Am. Orn.* viii. p. 91, pl. 69 (1814); *Dunn. Dict. Sc. Nat.* vi. p. 384 (1817); *Drap. Dict. Class. Sc. Nat.* iii. p. 136 (1823); *Wils. Am. Orn.* (2nd ed.) viii. p. 96 (1824); *Bp. Specch. Comp.* p. 73, n. 258 (1827); *Less. Tr. d'Orn.* p. 632 (1831); *Sw. & Richards. Faun. Bor.-Am.* p. xxxvii (1831); *A. R. Y. American Natural.* ii. p. 325 (Long Island) (1868); *Boardm. ibid.* iii. p. 383 (1869).

Rhynchaspis labradora, *Steph. Gen. Zool.* xii. 2, p. 121 (1824).

Anas (Fuligula) labradora, *Bp. Obs. Nomencl. Wils.* n. 276 (1825); *Nutt. Man.* ii. p. 428 (1834).

Fuligula labradora, *Bp. Ann. Lyc. N. Y.* ii. p. 391, n. 337 (1826); *id. Syn.* p. 391 (1828); *id. Isis*, 1832, p. 1189; *Aud. Orn. Biogr.* iv. p. 271, pl. 332 (1838); *id. Syn.* p. 288 (1839); *id. B. Am.* vi. p. 329, pl. 400 (1843); *DeKay, N. Y. Zool.* ii. p. 326 (1844);

Giraud, B. Long Isl. p. 327 (1844); *Schleg. Mus. P.-B.*, Anseres, p. 19 (1866).

Somateria labradora, *Boie, Isis*, 1828, p. 329; *A. Newt. Enc. Brit.* ed. 9, xviii. p. 735, f. 48 (1875).

Kamptorhynchus labradorus, *Eyt. Mon. Anat.* p. 151 (1838); *G. R. Gr. List Gen. B.* p. 75 (1840); *Eyt. Syn. Anat.* p. 108 (1869).

Camptorhynchus labradorus, *Bp. Comp. List*, p. 58, n. 391 (1838).

Fuligula grisea, *Leib, Journ. Ac. Sc. Philad.* viii. p. 170 (1840) (young) (=*labradora* young).

Camptolaimus labradorus, *G. R. Gr. List Gen. B.* ed. 2, p. 95 (1841): *id. List B. Brit. Mus.* iii. p. 141 (1844); *id. Gen. B.* iii. p. 623 (1844); *Rchnb. Syn. Av.*, Natatores, t. 77. ff. 895–96 (Mus. Dresd.) (1845); *id. Av. Syst. Nat.* p. viii (1852); *G. R. Gr. List Gen. & Subgen. B.* p. 124, gen. 2065 (1855); *id. Hand-list*, iii. p. 88, n. 10703 (1871); — ? *Forest and Stream*, May 4th, 1876 (Delhi Mill, Michigan, 1872); *A. O. U. Check-list N. Am. B.* p. 121, n. 156 (1886); *Ridgw. Man. N. Am. B.* p. 107 (1887); *Dutcher, Auk*, 1891, pp. 201–216, pl. ii.; — ? *Shooting and Fishing*, 1891, no. 22, p. 425 (*cf. Auk*, 1893, p. 294); *R. G.* [*A. C. Gould*], *Shooting and Fishing*, 1892, no. 18, p. 345; *Meyer, Auk*, 1892, p. 389 (Mus. Dresd., one female); *Allen, Auk*, 1893, p. 125; *Dutcher, Auk*, 1893, p. 270; *Stone, Auk*, 1893, p. 363; *Dutcher, Auk*, 1894, pp. 4–12; *Hartl. Abh. naturw. Ver. Brem.* xiv. 1, p. 23 (1895).

Camptolæmus labradorus, *Licht. Nomencl. Av.* p. 103 (one, Mus. Berlin) (1854); *Bp. Compt. Rend.* xliii. p. 651, n. 152 (1856); *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Salv. Cat. B. Strickl. Coll.* p. 539 (1882) (one specimen).

Camptolæmus labradorius, *Baird, B. N. Am.* p. 803 (1858) (two specim.); *id. Cat. N. Am. B.* n. 600 (1859); *Coues, Pr. Acad. Philad.* 1861, p. 239; *Verr. Pr. Ess. Inst.* iii. p. 158 (1862); *Lawr. Ann. Lyc. N. Y.* viii. 1866, p. 297 (1867); *Coues, Pr. Ess. Inst.* v. *Comm.* p. 300 (1868); *Turnbull, B. E. Pa.* p. 37 (1869) (rare); *Coues, Key N. Am. B.* p. 291 (1873); *id. Check-list*, n. 509 (1873); *Herrock, Bull. Ess. Inst.* v. p. 38 (1873); *Coues, B. N.-West*, p. 579 (1874); *Gregg, American Natural.* xiii. p. 128 (1879); *Cory, Beaut. and Curious B.* pt. iv. pl. — (1881); *Ridgw. Nom. N. Am. B.* n. 624 (1881); *Coues, Check-list*, 2nd ed. n. 729 (1882); *id. Key N. Am. B.* p. 706 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 63 (1884); *Milne-Edw. & Oust. Notice sur quelques Espèces d'Ois.* p. 51, pl. iv. (1893).

Anas labradorica, *Hall, Canad. Natur.* vii. p. 427 (1862) (Bay of Laprairie, Montreal District); *cf. Dutcher, Auk*, 1894, p. 176.

Labrador Duck, *Boardm. Amer. Natural.* iii. no. 7, p. 383 (1869).

Somateria labradoria, *Rowl. Orn. Misc.* ii. pp. 205–223, pl. 55 (♂, ♀, and ♂ juv.) (1877); *A. Newt. Dict. of Birds*, p. 222 (1893).

Fuligula labradoria, *Seebohm, Hist. Brit. B.* iii. p. 611 (note) (1885).

Camptolæmus labradoricus, *Sclat. P. Z. S.* 1880, p. 528; *Tristr. Cat. Coll. B.* p. 47 (1889) (one specimen).

Camptolaimus labradorius, *Stejn. Kingsl. Stand. Nat. Hist.* iv. p. 151 (1885); *Lucas, Report Nation. Mus.* 1888–89, p. 636, pl. cii. (♂) (1891); *Field, Columb. Mus. Sub.* i. no. 1 (1894) (*cf. Orn. Monatsb.* 1895, p. 100).

Adult male. Head, neck, jugulum, scapulars, and wings, except primaries, white; longitudinal stripe on the crown and occiput, collar round lower part of neck, back, rump, upper tail-coverts, primaries, tail, and entire lower parts black, the tail and lower

surface, except laterally and anteriorly, more greyish; breast and sides dusted with whitish points; the black collar composed of soft velvety feathers; on the anterior part of the cheeks a patch of stiff feathers; scapulars and tertials edged with black: "bill with the basal space between the nostrils, running into a rounded point in the middle, pale greyish blue; the sides of the base and the edges of both mandibles for two thirds of their length dull pale orange, the rest of the bill black; iris reddish hazel; feet light greyish blue; web and claws dusky" (*Audubon*); "cere flesh-colour, remainder of the bill blackish horn-colour; tarsi and irides yellow" (*Hall*). Total length about 22 inches, wing 8·75, tail 3·3, culmen 1·7, tarsus 1·5.

Adult female. Uniform brownish grey, the wing-coverts with dark mesial lines; wing-speculum formed by the secondaries and by the greater wing-coverts white; tertials edged with blackish; primaries dusky. Total length about 18 inches, wing 8·4, tail 3, culmen 1·65, tarsus 1·4.

Young male. "Similar to adult female, but chin and throat white, and the white of the chest strongly indicated; greater wing-coverts white" (*Ridgway*).

A specimen in the Rothschild collection, marked as *young male*, is similar to the adult female: general plumage greyish brown; head and neck with indistinct undulated dusky cross-lines; chin and throat dull white, sharply defined; lower breast slightly tinged with black; speculum white; longer scapulars and tertials silvery grey, the latter edged with dusky on the outer web; tail brown-grey; quills brown.

It is supposed that the Labrador Duck is now nearly, if not quite, extinct; the specimens known in Museums are 41.

Hab. Formerly northern Atlantic coast of North America, south in winter to Long Island, New Jersey, and the Great Lakes.

a. ♂ ad. sk.	N. America.	Hudson Bay Co. [P.].
b. ♀ ad. sk.	Labrador.	Purchased.

52. HENICONETTA.

	Type.
Macropus (subgen.), *Nutt. Man.* ii. p. 451 (1834) (*nec Spix*, 1824)	H. stelleri.
Polysticta, *Eyt. Cat. Brit. B.* p. 58 (1836) (*nec* Polisticte, *Smith*, 1835)	H. stelleri.
Stellaria (*errore*), *Bp. Comp. List*, p. 57 (1838) (*nec Möller*, 1832)	H. stelleri.
Eniconetta, *G. R. Gr. List Gen. B.* p. 75 (1840)	H. stelleri.
Stelleria, *Bp. Cat. Met. Ucc. Eur.* p. 74, gen. 232 (1842)	H. stelleri.
Heniconetta, *Agass. Ind. Univ. Nom. Zool.* p. 178 (1846).	

Range. Confined to the Arctic regions.

1. Heniconetta stelleri.

Anas stelleri, *Pall. Spic. Zool.* fasc. vi. p. 35, tab. v. (1769); *Gm. S. N.* i. 2, p. 518, n. 80 (1788); *Pall. Zoogr. Rosso-As.* ii. p. 238 (syn. emend.), tab. lxviii. (1811); *Schleg. Rev. Crit.* p. cxvi (1844); *Middend. Sibir. Reis.* ii. 2, p. 234, Taf. xxiii. ff. 3–5 (eggs) (1853); *L. Brehm, J. f. O.* 1857, p. 358; *Blas. Naumannia*, 1858, p. 316 (Heligoland) (1859); *id. Naumann's Vög. Deutschl.* xiii. p. 313 (1860); *id. Ibis*, 1862, p. 72 (Heligoland); *Swinh. P. Z. S.* 1863, p. 324; *Midd. Sibir. Reise*, iv. p. 988 (1867); *Homey. J. f. O.* 1870, p. 432; *Nordvi, J. f. O.* 1871, p. 208 (Finmark, breeding); *Gieb. Thes. Orn.* i. p. 362 (1872).

Western Duck, *Penn. Arct. Zool.* ii. p. 564, n. 497, pl. 23 (1785); *Lath. Syn.* iii. 2, p. 532, n. 74 (1785); *id. Suppl.* i. p. 275 (1787).

Anas dispar, *Sparrm. Mus. Carlson.* tabb. 7 & 8 (1786); *Gm. S. N.* i. 2, p. 535, n. 107 (1788); *Lath. Ind. Orn.* ii. p. 866, n. 83 (1790); *Bonn. Enc. Méth.* i. p. 145, pl. 30. f. 3 (1790); *Vieill. N. D.* v. p. 157 (1816); *Dum. Dict. Sc. Nat.* vi. p. 377 (1817); *Temm. Man. d'Orn.* 2nd ed. iv. p. 547 (1840); *Naum. Vög. Deutschl.* xii. p. 240, Taf. 320 (1844); *Pässl. J. f. O.* 1853, p. 320 (Lapland); *Gätke, J. f. O.* 1856, p. 377 (Heligoland).

Anas occidua, *Bonn. Enc. Méth.* i. p. 130 (1790); *Shaw, Nat. Misc.* pl. 32 (1790); *Yarrell, P. Z. S.* 1831, p. 35 (Dorking).

Clangula stelleri, *Boie, Isis*, 1822, p. 564; *Macgill. Man. Orn.* ii. p. 183 (1842).

Fuligula dispar, *Steph. Gen. Zool.* xii. 2, p. 206 (1824); *Jard. & Selb. Ill. Orn.* iii. pl. 136 (1835); *Jen. Man.* p. 243 (1835); *Gould, B. Eur.* v. pl. 372 (1837); *Aud. Orn. Biogr.* v. p. 253, pl. 430 (1839); *id. Syn.* p. 293 (1839); *id. B. Am.* vi. p. 368, pl. 407 (1843); *De Kay, N. Y. Zool.* ii. p. 334 (1844); *Schleg. Mus. P.-B.*, Anseres, p. 15 (1866).

Fuligula stelleri, *Bp. Ann. Lyc. N. Y.* ii. p. 394 (1826); *id. Syn.* p. 394 (1828); *id. Isis*, 1832, p. 1190; *Degl. Orn. Eur.* ii. p. 469 (1849); *Palmén, J. f. O.* 1876, p. 59 (Finland); *Brandt, J. f. O.* 1880, p. 249 (note); *Rchnw. J. f. O.* 1890, p. 84; *Brandt, J. f. O.* 1891, p. 268 (Kamtschatka).

Fuligula (Macropus) stelleri, *Nutt. Man.* ii. p. 451 (1834).

Polysticta stelleri, *Eyt. Cat. Brit. B.* p. 58 (1836); *id. Hist. Rarer Brit. B.* p. 79 (1836); *id. Mon. Anat.* p. 150 (1838); *Baird, B. N. Am.* p. 801 (1858); *id. Cat. N. Am. B.* n. 598 (1859); *Baird, J. f. O.* 1866, p. 344; *id. Ibis*, 1867, p. 286; *Dall & Bann. Tr. Chic. Acad.* i. p. 299 (1869); *Dall, Avif. Aleut. Isl. Unal. eastw.* p. 6 (1873); *id. Avif. Aleut. Isl. west. Unal.* p. 7 (1874); *Nelson, Cruise 'Corwin,'* p. 99 (1883); *Murdoch, Exped. to Point Barrow, Alaska*, p. 118 (1885); *Matschie u. Ziemer, J. f. O.* 1885, p. 191.

Stellaria dispar, *Bp. Comp. List*, p. 57 (1838).

Harelda stelleri, *K. & B. Wirbelth. Eur.* pp. lxxxvii, 230 (1840); *Heugl. J. f. O.* 1872, p. 128 (Taimir).

Eniconetta stelleri, *G. R. Gr. List Gen. B.* p. 75 (1840); *id. op. cit.* 2nd ed. p. 95 (1841); *id. Gen. B.* iii. p. 624 (1844); *Rchnb. Syn. Av.*, Natatores, t. 82. ff. 908–910 (1845); *id. Av. Syst. Nat.* p. viii (1852); *G. R. Gr. List Br. B.* p. 204 (1863); *Gould, B. Great Brit.* v. pl. 25 (1863); *Eyt. Syn. Anat.* p. 107 (1869); *Degl. & Gerbe, Orn. Eur.* ii. p. 553 (1869); *Stejn. Pr. U.S. Nat. Mus.* v. p. 38 (1882); *B., B., & R. Water-B. N. Am.* ii. p. 66 (1884); *Turner, Auk*, 1885, p. 158; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 170 (Bering

I.) (1885); *A. O. U. Check-list N. Am. B.* p. 121, n. 157 (1886); *Turner, Contr. N. H. of Alaska*, p. 135 (1888); *Nelson, Nat. Hist. Coll. in Alaska*, p. 75 (1887); *Ridgw. Man. N. Am. B.* p. 108 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Commander Isl.); *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Allen, Auk*, 1893, p. 123.

Stelleria dispar, *Bp. Cat. Met. Ucc. Eur.* p. 74, n. 457 (1842); *Macgill. Hist. Brit. B.* v. p. 164 (1852); *Bp. Compt. Rend.* xliii. p. 650, n. 127 (1856); *Fritsch, Naturg. Vög. Eur.* p. 436, Taf. 47. f. 10 (♂), 12 (♀) (1870); *G. R. Gr. Hand-list*, iii. p. 88, n. 10705 (1871); *Stejn. J. f. O.* 1873, p. 307 (Norway); *Goebel, ibid.* p. 422; *Reinh. Vid. Medd. Kjöbenh.* 1881, p. 188 (Greenland); *Walter, J. f. O.* 1890, pp. 234, 236 (Norway).

Somateria stelleri, *Jard. Brit. B.* iv. p. 73 (1843); *Newt. P. Z. S.* 1861, p. 400, pl. xxxix. f. 4 (egg); *Sharpe & Dress. B. of Eur.* vi. p. 649, pl. 447 (1871); *Rey, Synon. Eur. Brütv. u. Gäste*, p. 133 (1872); *Coues, Ibis*, 1872, p. 53; *Gurn. ibid.* p. 330 (Flaxman's Isl.); *Coues, Key N. Am. B.* p. 291 (1872); *id. Check-list*, n. 511 (1873); *id. B. N.-West*, p. 580 (1874); *Cordeaux, Ibis*, 1875, p. 186 (Heligoland); *Tacz. Orn. Faun. Vost. Sibir.* p. 72 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 48 (1877); *Collett, Nyt Mag. Naturvid.* xxvi. p. 376 (1881); *Elliot, Mon. Seal Isl.* p. 130 (1881); *Coues, Check-list*, 2nd ed. p. 116, n. 731 (1882); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883); *Saund. in Yarrell's Hist. Brit. B.* iv. p. 468 (1884–85); *Seeb. Hist. Brit. B.* iii. p. 613, pl. 59 (egg) (1885); *Dedit. J. f. O.* 1885, p. 207 (S. Petersburg); *Seeb. Ibis*, 1888, p. 350 (Great Liakoff Isl.); *Tristr. Cat. Coll. B.* p. 47 (1889); *Saund. Ill. Man. Brit. B.* p. 451 (1889); *Schal. J. f. O.* 1890, p. 79; *Seeb. B. Japan. Emp.* p. 257 (1890); *id. Ibis*, 1892, p. 28 (Heligoland); *Collett, Mindre Medd. ved. Norges Fuglef.* 1881–92, p. 290 (1894).

Somateria dispar, *Yarr. Hist. Brit. B.* 2nd ed. iii. p. 305 (1845), 3rd ed. iii. p. 306 (1856); *Sclat.* (?) *Ibis*, 1863, p. 477; *Homey. J. f. O.* 1872, p. 308 (Danzig, Königsberg, and Pillau); *Blakist. Ibis*, 1876, p. 335 (Kamtschatka); *Homey. J. f. O.* 1878, p. 120; *Blakist. & Pryer, Ibis*, 1878, p. 215 (Kamtschatka and Kurile Isl.); *id. Tr. As. Soc. Jap.* viii. p. 187 (1880), x. p. 100 (1882); *Blakist. Amend. List B. Jap.* p. 29 (1884).

Fuligula (Polisticta) stelleri, *Brandt, Mém. Acad. St. Pétersb.* (6) *Sc. Nat.* (1849) vi. p. 7 (1847).

Heniconetta stelleri, *Licht. Nomencl. Av.* p. 103 (1854); *Sundev. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Meves, J. f. O.* 1875, p. 433; *Sclat. P. Z. S.* 1882, p. 527; *Salv. Cat. B. Strickl. Coll.* p. 539 (1882); *B. O. U. List Brit. B.* p. 133 (1883); *Altum, J. f. O.* 1885, p. 375 (Mark); *Hartert, Ibis*, 1892, p. 519 (E. Prussia).

Polysticta dispar, *Collett, Vidensk. Selsk. Förhandl.* 1868, p. 180 (Norway); *id. J. f. O.* 1869, p. 394.

Fuligula (Heniconetta) dispar, *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 47 (1882).

Somateria (Heniconetta) stelleri, *Coues, Key N. Am. B.* 2nd ed. p. 709 (1884).

Adult male. Head and upper neck satiny white; lores and short occipital tuft olive-green; space round the eyes, a spot on each side of the occipital tuft, a collar round the middle of the neck (broader behind) velvety black with a purple gloss; chin and throat brown-

black, separated from the collar by a narrow white band; another white band edges the black collar below; middle of the back, rump, and upper tail-coverts black, with a purple gloss; lower parts deep tawny, becoming dusky or blackish on belly and fading into a more buffy or ochreous tint on chest, sides, and flanks; a black round spot on each side of the breast; lower abdomen, vent, and under tail-coverts black, the latter somewhat glossy; scapulars long and narrow, bent downwards, glossy blue-black on the outer web, satiny white on the inner one, which is very narrow; all the wing-coverts and anterior scapulars white; speculum on the secondaries glossy blue-black, edged with a white band at the tip; tertials rather broad and resemble the larger scapulars, having the outer web glossy blue-black and the inner one white; primaries blackish brown; under wing-coverts white; axillaries white; tail blackish brown: "bill of a lead-colour, horny white at the tip; feet and toes dark lead-colour, webs black-grey; irides dark brown" (*Schrader*). Total length about 18 inches, wing 8·5, tail 4·5, culmen 1·6, tarsus 1·4.

Female. Dark rufous brown, an indistinct collar round the neck formed by rufous-chestnut indistinct bars; interscapular region with irregular rufous-brown bars, almost hidden on the occiput and nape; rump almost uniform dark brown, usually with indistinct rufous bars; some irregular indistinct bars on the breast; abdomen and under tail-coverts uniform brown; wings dark brown, speculum dark metallic blue, bounded (as in the male) anteriorly by a white band at the tip of the last row of upper wing-coverts, and posteriorly by a similar band at the tip of the secondaries; falcate tertials dusky, with the outer web metallic blue and a silvery-grey band along the middle; marginal under wing-coverts brown, edged with white, the inner ones with the axillaries white; tail brown.

Young. Similar to adult female, but much paler brown; sides of the head and throat dull whitish buff, with some dusky streaks; tertials much less falcate, and speculum dusky greyish brown, bounded anteriorly by a white band at the tip of the greater wing-coverts and posteriorly at the tip of the secondaries.

Hab. Arctic and Subarctic coasts of the Northern hemisphere, breeding on the Varanger Fjord (Norway), in Russian Finmark, and from the Taimyr Peninsula eastward to Bering Strait and Alaska. It has been found in Cumberland Bay, in Disco Fjord (Greenland), along the coasts of Kamtschatka, and in the Kurile Islands; occasionally it straggles to the temperate portions of Europe.

a, *b*. ♀ ad. sk.	No locality.	Salvin-Godman Coll.
c, *d*, *e*. ♂ ad. et juv. st.	Iceland.	Dr. Thienemann [P.].
f. ♂ ad. sk.	Norway (*Christiania Mus.*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Vardö, N. Norway.	Salvin-Godman Coll.
h. ♂ ad. sk.	Varanger Fjord, N. Norway, May (*Meves*).	Seebohm Coll.
i, *k*. ♂ ad. et juv. st.	Russian America.	Capt. Collinson [P.].
l. ♀ imm. sk.	Point Barrow, N. Alaska, June.	Salvin-Godman Coll.

m–p. ♂ ♀ imm. et juv. sk.	St. Michael's, Alaska, Sept., Oct. (*E. W. Nelson*).	Salvin-Godman Coll.
q, r, s. ♂ ♀ ad. sk.	St. Paul, Kodiak I., June (*W. J. Fisher*).	Salvin-Godman Coll.
t, u, v. ♂ ♀ ad. sk.	Unalashka Island, Dec. (*L. M. Turner & M. W. Harrington*).	Salvin-Godman Coll.

53. ARCTONETTA.

Type.

Lampronetta (subgen.), *Brandt, Mém. Acad. St. Pétersb.* (6) (*Sc. Nat.*) vi. 1849, p. 5 (publ. 1847) (*nec* Lampronessa, *Wagl.*) ..... A. fischeri.

Arctonetta, *G. R. Gr. P. Z. S.* 1855, p. 212 (= Lampronetta, *Brandt*).

Range. Confined to North-west America.

1. Arctonetta fischeri.

Fuligula (Lampronetta) fischeri, *Brandt, Mém. Ac. St. Pétersb.* (6) vi. (1849) pp. 6, 10, 14, pl. i. ff. 1–4 (1847)*.

Somateria fischeri, *G. R. Gr. Gen. B.*, App. p. 28 (1849); *Eyt. Syn. Anat.* p. 105 (1869); *Coues, Key N. Am. B.* p. 292 (1872); *id. Check-list*, n. 512 (1873); *id. B. N.-West*, p. 580 (1874); *id. Check-list*, 2nd ed. p. 116, n. 732 (1882); *Saund. Ibis*, 1883, p. 348.

Lampronetta fischeri, *G. R. Gr. P. Z. S.* 1855, p. 211, pl. cviii. (♂, ♀, & young ♂); *Bp. Compt. Rend.* xliii. p. 650, n. 126 (1856); *Baird, B. N. Am.* p. 803 (1858); *id. Cat. N. Am. B.* n. 599 (1859); *Elliot, Illustr. B. of North Am.* pl. 47 (pt. v., 1867); *Dall & Bann. Tr. Chic. Acad.* i. p. 299 (1869); *Dall, Pr. Calif. Acad.* v. p. 30 (1873); *Adams, Ibis*, 1878, p. 433; *Sclat. P. Z. S.* 1880, p. 528; *Ridgw. Nom. N. Am. B.* n. 626 (1881); *Nels. Cruise 'Corwin,'* p. 100 (1881); *Murdoch, Exped. to Point Barrow, Alaska*, p. 119 (1885); *Matschie u. Ziemer, J. f. O.* 1885, p. 192.

Arctonetta fischeri, "*G. R. Gr.*," *Baird, B. N. Am.* p. 803 (1858); *Blakist. Ibis*, 1863, p. 150; *G. R. Gr. Hand-list*, iii. p. 89, n. 10709 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *B., B., & R. Water-B. N. Am.* ii. p. 69 (1884); *A. O. U. Check-list N. Am. B.* p. 122, n. 158 (1886); *Turner, Contr. N. H. of Alaska*, p. 136 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 76, pl. v. f. 1 (head of the male) (1887); *Ridgw. Man. North Am. B.* p. 108 (1887); *Allen, Auk*, 1893, p. 123.

Anas fischeri, *Gieb. Thes. Orn.* i. p. 351 (1872).

Blue-eyed Duck, *Adams, Ibis*, 1878, p. 433 (Michalaski).

Somateria (Lampronetta) fischeri, *Rchnw. Orn. Centralbl.* 1882, p. 18.

Fuligula fischeri, *Hartl. J. f. O.* 1883, p. 258.

Somateria (Arctonetta) fischeri, *Coues, Key N. Am. B.* 2nd ed. p. 710, n. 732 (1884).

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* "*Fuligulam* (*Lampronettam*) *fischeri* novam Avium Rossicorum speciem, præmissis observationibus ad Fuligularum generis sectionum et subgenerum quærundam characteres et affinitates spectantibus descripsit J. F. Brandt" (*l. c.* pp. 1–15).

Adult male. On the orbital region a satiny white pad, bordered by a velvety black edge, broader anteriorly and posteriorly than above, wanting below; lores and forehead covered by stiffened feathers, white anteriorly, shading into olive-green, and this into light greenish buff; crown and occiput covered by a cowl or hood of pendent, stiffened, hair-like feathers of a light olive-green colour; a broad stripe of darker green beneath the eye; throat, neck, back, smaller upper wing-coverts, scapulars, and falcated tertials white; lower back, rump, upper tail-coverts, and lower parts dark smoky grey; a patch on each side of rump white; greater wing-coverts and quills brown, edge of the wing and under wing-coverts pale brown; tail brown: "iris bright milky white; feet and legs dull olive-brown, except the scales in front of tarsus, which are dingy yellowish; bill dull orange" (*Nelson*). Total length about 21·5 inches, wing 10, tail 3, culmen 1, tarsus 1·7.

Adult female. Above barred with fulvous and black; lower parts similar, the abdomen, however, plain greyish brown; head and neck light greyish buff, finely streaked with dusky, the throat, however, nearly immaculate; there is a slight indication of the pad round the eyes, and the feathers of the lores and forehead have quite a velvety texture; quills and greater coverts brown, the latter like the secondaries tipped with whitish: "bill dull blue; feet and tarsi dull yellowish brown" (*Nelson*).

Young. Similar to the female: "bill dark olive-brown; legs and feet dull yellowish, shaded with olive-brown" (*Nelson*).

Young in down. Brown, paler and more greyish brown below; there is already indicated the peculiar ring round the eyes.

Hab. Coast of Alaska, from Norton Sound to Point Barrow.

a. ♂ ad. st.	Northern Sound, N.W. America (*Adams*).	Voy. of H.M.S. 'Enterprise.' (Specimen figured by Gray, P. Z. S. 1855, pl. 108.)
b. ♀ ad. st.	Northern Sound, N.W. America (*Adams*).	Voy. of H.M.S. 'Enterprise.' (Type of female's descrip., Gray, P. Z. S. 1855, p. 212, pl. 108.)
c–o. ♂ ♀ ad., juv., et pull. sk.	St. Michael's, Alaska, June–Sept. (*E. W. Nelson*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Andreffsky, Alaska, June (*E. W. Nelson*).	Salvin-Godman Coll.
q. ♀ juv. sk.	Stewart's Island, Alaska, Sept. (*E. W. Nelson*).	Salvin-Godman Coll.

54. SOMATERIA.

Type.

Somateria, *Leach in Ross's Voy. Discov.*, Append. p. xlviii (1819) ..... S. mollissima.

Ganza, *Merrem, in Ersch u. Gruber's Encycl.* iii. p. 471 (1819) (*ex Plin. Hist. nat.* Libr. 10, Cap. 23) ..... S. mollissima.

Platypus, *Brehm, Lehrb. Nat. eur.* ii. *Vög.* p. 805 (1824) (=Somateria, part.).

Gauza, "*Merrem*" (*errore*), *G. R. Gr. Hand-list*, iii. p. 88 (1871).

Type.

Erionetta (subgen.), *Coues, Key N. Amer. B.* 2nd ed. p. 709 (1884) ..... S. spectabilis.

Range. Confined to Arctic and Subarctic regions.

Key to the Species.

a. Anterior point of feathering on forehead reaching about halfway from the point of the naked frontal angles to nostrils; feathering of lores extending forward to beneath the middle or posterior end of nostrils. *Males* with scapulars and tertials white; the upper half of the head chiefly black.

a'. Naked frontal angles broad, and terminating in a broad round end. *Male* with the throat entirely white (but some specimens with a trace of a V-shaped dusky mark); black of head bordered beneath by pale green for nearly its entire length..... *dresseri*, p. 424.

b'. Naked frontal angles narrow and more or less pointed.

a''. Throat of the *adult male* entirely white; black of head with no green border beneath, except on the occiput ..... *mollissima*, p. 425.

b''. Throat of the adult with a large V-shaped mark of black ..... *v-nigrum*, p. 430.

b. Anterior point of feathering on forehead reaching as far as posterior end of nostrils. *Adult males* with lateral base of upper mandible enlarged into a very conspicuous broad naked lobe (subgen. *Erionetta*); upper part of the head light bluish grey; throat with a V-shaped black mark, as in the male of *S. v-nigrum* ..... *spectabilis*, p. 432.

1. Somateria dresseri.

Anas mollissima, *Wils.* (*nec Linn.*) *Am. Orn.* viii. p. 122, pl. 71 (1814); *Bp. Specch. Comp.* p. 72, n. 247 (1827); *Less. Tr. d'Orn.* p. 631 (part.) (1831).

Anas (Fuligula) mollissima, *Bp. Obs. Wils.* n. 244 (1825).

Fuligula mollissima, *Bp. Ann. Lyc. N. Y.* ii. p. 388 (1826); *id. Syn.* p. 388 (1828); *Aud. Orn. Biogr.* iii. p. 344 (1835), v. p. 611, pl. 246 (1839); *id. Syn.* p. 291 (1839); *id. B. Am.* vi. p. 349, pl. 405 (1843); *De Kay, N. Y. Zool.* ii. p. 332 (1844); *Giraud, B. Long Isl.* p. 331 (1844).

Fuligula (Somateria) mollissima, *Nutt. Man.* ii. p. 407 (1834).

Somateria mollissima, *Bp.* (*nec Linn.*) *Comp. List*, p. 57, n. 381 (1838); *Baird, B. N. Am.* p. 809 (part.) (1858); *id. Cat. B. N. Am.* n. 666 (part.) (1859); ? *Cass. Pr. Ac. Philad.* 1861, p. 239 (Labrador); *Bryant, Pr. Bost. Soc. N. H.* viii. p. 66 (Labrador) (1861); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 139 (Maine) (1862); *Verr. Pr. Ess. Inst.* p. 159 (1862); *Blakist. Ibis*, 1863, p. 150 (Hudson's Bay); *Lawr. Ann. Lyc. Nat. Hist. N. Y.* viii. p. 297 (Atl. Coast N. Am.) (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 557, obs. 2 (1867); *Coues, Pr. Ess. Inst.* v. p. 300 (1868); *Turnb. Birds E. Pa.* p. 46 (New Jersey) (1869); *G. R. Gr. Hand-list*, iii.

p. 88, n. 10706 (part.) (1871); *Coues, Key N. Am. B.* p. 293, n. 513 (part.) (1872).

Fuligula spectabilis × Fuligula mollissima, *Selys, Bull. Ac. Roy. Brux.* xxiii. 2, p. 16 (Newfoundland) (1856).

Somateria dresseri, *Sharpe, Ann. & Mag. N. H.* (4) viii. pp. 51, 52, f. 2 (head) (N. America) (1877); *Sharpe & Dress. B. of Eur.* vi. p. 642, f. 2 (head) (1871); *B., B., & R. Water-B. N. Am.* ii. p. 76 (1884); *Saunders, Yarrell's Hist. Brit. B.* iv. p. 459 (1884–85); *A. O. U. Check-list N. Am. B.* p. 122, n. 160 (1886); *Ridgw. Man. N. Am. B.* p. 110 (1887); *Shufeldt, Pr. U. S. Nat. Mus.* xi. pp. 222 and foll., ff. 8, 11, 12, 13, 14 (osteology) (1888); *White, Auk*, 1890, p. 204 (Ottawa, Canada); *Mackay, Auk*, 1890, pp. 315-319, 1892, p. 305; *W. S. J., Forest and Stream*, 1893, p. 96 (Maine); *Mackay, Auk*, 1893, pp. 77, 248, 370, 1894, p. 223 (Massachusetts); *Whitfield, ibid.* p. 323.

Somateria mollissima, *var.* dresseri, *Coues, B. N.-West*, p. 580 (1874).

Somateria mollissima dresseri, *Ridgw. Pr. U.S. Nat. Mus.* iii. pp. 205, 222 (1880); *id. Nom. N. Am. B.* n. 627 *a* (1881); *Coues, Check-list*, 2nd ed. p. 116, n. 734 (1882); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 120 (Labrador); *Coues, Key N. Am. B.* 2nd ed. p. 712, n. 734, f. 2, p. 708 (1884); *Seeb. Hist. Brit. B.* iii. p. 616 (1885); *Nehrl. J. f. O.* 1885, p. 148 (Lake Michigan).

Adult male. Similar to that of *S. mollissima*, but with angles on sides of forehead broad and rounded, instead of narrow and pointed; black of head bordered beneath by pale green for nearly its entire length; throat, in some specimens, with a trace of a V-shaped dusky mark: bill from posterior end of nostril 1·35–1·48 inches, angle from anterior extremity of loral feathering 1·75–2, its width across not less than ·45, depth of upper mandible at frontal apex 1–1·28.

Adult female. Similar to that of *S. mollissima*: bill from posterior end of nostril 1·32 inches, angle 1·87, width 0·22; depth of upper mandible 0·78.

Hab. Atlantic coast of North America, from Maine to Newfoundland and southern Labrador; south, in winter, to the Delaware and the Great Lakes.

a. ♂ ad. sk.	Bay of Fundy (*H. E. Dresser*).	Salvin-Godman Coll.
b. ♂ ad. sk.	Boston Market, Jan. (*H. W. Henshaw*).	Salvin-Godman Coll.
c. ♂ juv. st.	N. America.	Old Coll.

2. Somateria mollissima.

The Eider Duck.

Anas s. cutberti *s.* farnensis, *Willugh. Orn.* p. 278, t. 76 (♀).

Anser lanuginosus *sive* Eider, *Briss. Orn.* vi. p. 294, pls. xxix. (♂), xxx. (♀) (1760).

Eder fuglens, *Brünn. Eder Fuglens beskrivelse*, pp. 1–60 (1763).

Anas mollissima, *Linn. S. N.* i. p. 198, n. 15 (1766); *Phipps, Voyage*, App. p. 186 (Spitsbergen) (1774); *Sparrm. Mus. Carlson.* fasc. i. t. 6 (jun.) (1786); *Gm. S. N.* i. 2, p. 514, n. 15 (1788); *Lath. Ind. Orn.* ii. p. 845, n. 35 (1790); *Temm. Man. d'Orn.*

p. 549 (part.) (1815); *Vieill. N. D.* v. p. 112 (part.) (1816); *Dum. Dict. Sc. Nat.* xiv. p. 271 (part.) (1819); *Temm. Man. d'Orn.* 2nd ed. ii. p. 848 (1820); *Scoresby, Acc. of the Arct. Reg. &c.* i. p. 527 (Spitsbergen) (1820); *Faber, Prodr. isl. Orn.* p. 68 (1822); *Licht. Verz. Doubl.* p. 85 (1823); *Ross in Parry's Narrat.*, App. p. 197 (Spitsbergen) (1828); *Less. Man. d'Orn.* ii. p. 415 (1828); *id. Tr. d'Orn.* p. 613 (part.) (1831); *Temm. Man. d'Orn.* 2nd ed. iv. p. 541 (1840); *Naum. Vög. Deutschl.* xii. p. 252, Taf. 321, 322 (1844); *Schleg. Rev. Crit.* p. cxvi (1844); *Gieb. Thes. Orn.* i. p. 357 (part.) (1872).

Oie à duvet, ou Eïder, *D'Aubent. Pl. Enl.* n. 209 (♂), 208 (♀) (17—); *Buff. Hist. Nat. Ois.* ix. p. 103, pl. 6 (1783).

Eider or Cuthbert Duck, *Penn. Brit. Zool.* ii. n. 271, pl. 95 (1776); *Lath. Syn.* iii. 2, p. 470, n. 29 (1785).

Anser septentrionalis, *Gerini, Stor. degli Ucc.* t. clxii. (1776).

Anser mollissimus, *Bonn. Enc. Méth.* i. p. 119, pl. 33. f. 2 (1790).

Anas cuthberti, part., *Pall. Zoogr. Rosso-As.* ii. p. 235 (1811).

Anser lanuginosus, *Leach, Syst. Cat. Mamm. & B. Brit. Mus.* p. 37 (1816).

Somateria (Cutbert's Eider), *Leach, in Ross's Voy. Disc.*, App. p. xlviii (1819).

Somateria mollissima, *Flem. Phil. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 564; *Steph. Gen. Zool.* xii. 2, p. 224, pl. 60 (1824); *Jen. Man.* p. 227 (1835); *Lafresn. Echo du Monde sav.* no. 2, 1836, p. 5 (*cf. Less. Compl. de Buff.* 2nd ed. p. 720, 1838); *Gould, B. Eur.* v. pl. 374 (1837); *Sw. Class. B.* ii. p. 368 (1837); *Bp. Comp. List*, p. 57, n. 416 (1838); *Rep. Counc. Z. S.* 1839, p. 39; *K. & B. Wirbelth. Eur.* pp. lxxxvi, 228 (1840); *Gulliv. P. Z. S.* 1842, p. 72 (muscular fibres); *Macgill. Man.* ii. p. 177 (1842); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 141 (part.) (1844); *id. Gen. B.* iii. p. 624, n. 1 (syn. emend.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 83. ff. 152-158 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 307, n. 1791 (1849); *Rchnb. Av. Syst. Nat.* p. viii (1852); *Licht. Nomencl. Av.* p. 103 (1854); *Bp. Compt. Rend.* xliii. p. 650, n. 123 (1856); *Rafn, Naumannia*, 1857, ii. p. 128 (Sylt); *Evans & Sturge, Ibis*, 1859, p. 167 (Spitsbergen); *Torell, Bidr. till Spitsber. Molluskf. etc.* p. 57 (Spitsbergen) (1859); *G. R. Gr. List Brit. B.* p. 205 (1863); *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1863, p. 109 (Spitsbergen); *id. J. f. O.* 1863, p. 380; *Newt. P. Z. S.* 1864, p. 495; *More, Ibis*, 1865, p. 444 (Great Britain); *A. Newt. Ibis*, 1865, p. 515 (Spitsbergen); *Cunningh. Ibis*, 1866, p. 16; *Baird, Ibis*, 1867, p. 286 (part.); *Degl. & Gerbe, Orn. Eur.* ii. p. 555 (1867); ? *Droste, J. f. O.* 1868, p. 44 (Borkum); *Sclat. P. Z. S.* 1869, p. 629 (Zool. Gard.: breeding); *Fritsch, J. f. O.* 1869, p. 46 (Bohemia); *Boie, ibid.* p. 97 (Lofoten); *S. Müller, ibid.* p. 347 (Färoe); *Gould, B. of Great Brit.* v. pl. 26 (1870); *Gillett, Ibis*, 1870, p. 309 (Nowaja-Semlja); *G. R. Gr. Hand-list*, iii. p. 88, n. 10706 (part.) (1871); *Sharpe, Ann. & Mag. N. H.* (4) viii. pp. 51, 52, f. 1 (head) (1871); *Sharpe & Dress. B. Eur.* vi. p. 629, pl. 445 (1871); *Salvad. Faun. d'Ital., Ucc.* p. 268 (1872); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Feild. Zoolog.* 1872, p. 3254 (Faeroe); *Heugl. Ibis*, 1872, p. 63 (Novaja Zemlia); *id. J. f. O.* 1872, p. 122 (Novaja Semlja); *Fritsch, J. f. O.* 1872, p. 372 (Bohemia); *Finsch, Zweite Deutsche Nordpolfahrt*, ii. *Vög.* p. 209 (1873); *Durnf. Ibis*, 1874, p. 403 (N. Frisian I.); *Heugl. Reis. Nordpolarmeer*, iii. p. 137 (1874); *Cord. Ibis*, 1875, p. 186 (Heligoland); *Sclat. P. Z. S.* 1880, p. 528; *Brandt, J. f. O.* 1880,

p. 249 (note); —? *J. f. O.* 1880, p. 404 (Sylt); *Gigl. Ibis*, 1881, p. 215 (Italy); *Tschusi zu Schmidh. J. f. O.* 1881, p. 212 (E. Hungary); *Rchnw. Orn. Centralbl.* 1882, p. 18; *id. Vög. zool. Gärt.* p. 49 (1882); *Seeb. Ibis*, 1882, p. 383 (Archangel); *Neale, P. Z. S.* 1882, p. 654 (Franz Josef Land); *Salv. Cat. B. Strickl. Coll.* p. 539 (1882); *B. O. U. List Brit. B.* p. 134 (1883); *Sclat. List Vert. An.* 8th ed. p. 441 (1883); *Nimi, Atti Soc. Ital. Sc. Nat.* xxvi. p. 160 (Venetian) (1883); *Fritsch, MT. orn. Ver. Wien*, 1884, p. 31 (Pilsen); *Saund. Yarrell's Hist. Brit. B.* iv. p. 457 (1884–85); *Dixon, Ibis*, 1885, p. 87 (St. Kilda); *Mojsisovics, MT. orn. Ver. Wien*, 1885, p. 6 (Styria); *Seeb. Hist. Brit. B.* iii. p. 616, pl. 59 (egg) (1885); *Salvad. El. Ucc. Ital.* p. 266 (1887); *Harting, Zoolog.* 1887, p. 256 (Iceland); *Schal. J. f. O.* 1887, p. 187 (Jona Isl.); *Hartert, ibid.* p. 268 (Dusseldorf); *Hartwig, J. f. O.* 1889, p. 146 (North Cape); *Tristr. Cat. Coll. B.* p. 47 (1889); *Magaud d'Aubusson, Bull. Soc. Acclim.* 1889, pp. 896–901; *Schal. J. f. O.* 1890, p. 9; *Rchnw. ibid.* p. 83; *Walter, ibid.* pp. 234, 235, 236, 237, 238, 239, 243, 245, 247, 249, 252 (E. Spitsbergen); *Evans, Ibis*, 1891, p. 73 (incubation); *Lydekk. ibid.* p. 391 (fossil); *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Sharpe, Cat. Osteol. Spec. Coll. Surg.* iii. p. 307 (1891); *Seeb. Ibis*, 1892, p. 28 (Heligoland); *Hartert, ibid.* p. 519; *Lilford, Col. Fig. Brit. B.* pt. xxii. pl. — (1892); *Blagg, Ibis*, 1893, p. 354 (Shetland); *Pears. & Bidw. Ibis*, 1894, p. 232 (N. Norway); *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881–92, p. 277 (1894).

Platypus mollissimus, *Brehm, Lehrb. eur. Vög.* p. 809 (1824); *id. Ornis*, i. p. 38 (1824); *id. Isis*, 1826, p. 993; *Schilling, J. f. O.* 1853, p. 377.

Somateria danica, *Brehm, Isis*, 1830, p. 998, n. 1; *id. Vög. Deutschl.* p. 890 (1831) (Danish Islands); *id. Naumannia*, 1855, p. 299; *id. Vogelf.* p. 388 (1855).

Somateria norwegica, *Brehm, Isis*, 1830, p. 998, n. 2 (Norway); *id. Vög. Deutschl.* pp. 892, 1035, Taf. xliii. f. 1 (♂ ad. in autumn) (1831); *id. Naumannia*, 1855, p. 299.

Somateria platyuros, *Brehm, Isis*, 1830, p. 998, n. 3; *id. Vög. Deutschl.* p. 892 (1831) (Helsingfors in winter); *id. Naumannia*, 1855, p. 299; *id. Vogelf.* p. 389 (1855).

Somateria faeroeensis, *Brehm, Isis*, 1830, p. 998, n. 4; *id. Vög. Deutschl.* p. 893 (1831) (Faroë Isl.); *id. Naumannia*, 1855, p. 299.

Somateria megauros, *Brehm, Isis*, 1830, p. 998, n. 5; *id. Vög. Deutschl.* p. 894 (1831) (Inseln des sehr hohen Norden).

Somateria islandica, *Brehm, Isis*, 1830, p. 998, n. 6 (Iceland); *id. Vög. Deutschl.* p. 895 (1831) (Iceland); *id. Naumannia*, 1855, p. 299.

Somateria st. cuthberti, *Eyt. Cat. Brit. B.* p. 58 (1836); *id. Mon. Anat.* p. 149 (1838); *id. Syn. Anat.* p. 106 (1869).

Fuligula mollissima, *Selys-L. Faun. Belg.* i. p. 143 (1842); *Degl. Orn. Eur.* ii. p. 463 (1849); *Schleg. Mus. P.-B.*, Anseres, p. 14 (part) (1866); *Palmén, J. f. O.* 1876, p. 57 (Finland); *Wallengren, J. f. O.* 1893, p. 168 (Sweden).

Somateria spectabilis, *Beech.* (*nec Linn.*) *Voy. of Discovery etc.* p. 100 (Spitsbergen) (1843).

Fuligula (Somateria) mollissima, *Brandt, Mém. Ac. St. Pétersb.* (6) vi. (1849) p. 5 (1847).

Somateria mollissima, var., *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1864, p. 399; *id. J. f. O.* 1865, p. 214 (Spitsbergen).

Somateria thulensis, *Malmgr. Œfv. K. Vet.-Ak. Förh.* 1864, p. 380;

id. J. f. O. 1865, p. 396 (Spitsbergen); *A. Newt. J. f. O.* 1867, p. 210; *Heugl. J. f. O.* 1871, pp. 88, 98, 101, 105 (W. Spitsbergen); *id. Peterm. Geogr. Mitth.* 1871, pp. 59, 65; *Heugl. Reis. n. d. Nordpolarmeer*, i. p. 103, iii. p. 137 (1874).

For America (Somateria borealis).

Great Black and White Duck, *Edw. Nat. Hist. of B.* i. p. 98, pl. 98 (1750) (Greenland).

Anas magna nigra & alba, *Edw. op. cit.* p. 128, n. 98 (1750).

Anas mollissima, part., *Sabine, Tr. Linn. Soc.* xii. 2, p. 554, pl. 30. ff. 1, 2 (trachea) (1818) (Greenland).

Platypus borealis, *Brehm, Lehrb. eur. Vög.* p. 813 (1824) (Coasts of Baffin's Bay and Davis's Strait); *id. Ornis*, i. p. 38 (1824); *id. Isis*, 1826, p. 995 (Iceland).

Platypus leisleri, *Brehm, Ornis*, i. p. 28 (1824) (Greenland); *cf. Bull. Sc. Nat.* x. p. 151 (1827); *Less. Compl. de Buff., Ois.* ix. p. 533 (1837); *id. op. cit.* 2nd ed. p. 720 (1838).

Somateria borealis, *Brehm, Isis*, 1830, p. 998, n. 7; *id. Vög. Deutschl.* p. 896 (1831); *id. Naumannia*, 1855, p. 299; *Allen, Auk*, 1893, p. 123.

Somateria leisleri, *Brehm, Isis*, 1830, p. 998, n. 8; *id. Vög. Deutschl.* p. 896 (Greenland) (1831); *id. Naumannia*, 1855, p. 299; *id. Vogelf.* p. 388 (1855).

Somateria planifrons, *Brehm, Isis*, 1830, p. 998, n. 9; *id. Vög. Deutschl.* p. 897 (Greenland) (1831); *id. Naumannia*, 1855, p. 299; *id. Vogelf.* p. 388 (1855).

Somateria mollissima, *Holböll, Kröyer's Naturhist. Tidskr.* iv. p. 445 (1843) (Greenland); *id. Fauna Grönlands* (*Paulsen transl.*) p. 73 (1846); *id. Orn. Beitr. Faun. Grönl.* p. 69 (1854); *Baird, B. N. Am.* p. 809 (part.) (1858); *id. Cat. N. Am. B.* n. 600 (part.) (1859); *Reinh.* (*nec Linn.*) *Ibis*, 1861, p. 14 (Greenland); *Blakist. Ibis*, 1863, p. 150 (Hudson's Bay); *Baird, Ibis*, 1867, p. 286 (part.); *Brown, P. Z. S.* 1868, p. 360; *Harting, P. Z. S.* 1871, p. 118 (Baffin's Bay); *Coues, Key N. Am. B.* p. 293, n. 513 (part.) (1872); *Feild. P. Z. S.* 1877, p. 29 (Norman-Lockyer I.); *id. Ibis*, 1877, p. 411; *Kumlien, Bull. U.S. Nat. Mus.* no. 15, p. 89 (Cumberland Gulf) (1879); *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 204 (1880); *id. Nom. N. Am. B.* n. 627 (1881); *Coues, Check-list*, 2nd ed. p. 16, n. 733 (1882); *id. Key N. Am. B.* 2nd ed. p. 710 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 73 (1884); *A. O. U. Check-list N. A. B.* p. 122, n. 159 (part.) (1886).

Somateria mollissima borealis, *A. E. Brehm, Verz. Samml. eur. Vög.* p. 14 (1866); *Ridgw. Man. N. Am. B.* p. 109 (1887); *A. O. U. Check-list N. Am. B., Supplement*, p. 20, n. 159 (1889).

Fuligula mollissima, part., *Schleg. Mus. P.-B.*, Anseres, p. 14, spec. 2, 3, 7 (1866).

Adult male. Upper part of the head deep velvety black, with a line of white dividing the centre of the crown from the level of the eye to the nape; nape and hinder part of the auricular region covered with stiff feathers of a pale sea-green; cheeks, neck, back, and scapulars white; lower part of the centre of the back, rump, and upper tail-coverts black; throat white, gradually shading into yellowish buff on the lower part of the fore-neck and upper breast; rest of the under surface of the body black, with a

conspicuous white patch on either side of the rump; smaller and median wing-coverts white, the greater coverts like the secondaries brown-black, primaries slightly paler; inner secondaries white, broadly edged with brown-black on the outer web; tertials white, slightly falcated; marginal under wing-coverts pale brown, edged with white, the central ones and axillaries white; tail greyish brown: bill dull olive-green, almost olive-yellow in old birds, nail brownish white; feet light olive-green, claws brownish black; iris brown. Total length about 22 inches, wing 12, tail 5, culmen 2·2, tarsus 1·8.

Female. General plumage pale rufous-brown, head and neck with narrow black streaks along the centres of the feathers, but the upper part of the head blacker; upper and under parts banded with black and rufous-brown; the black bands on the back broader; greater wing-coverts and secondaries uniform dark brown, with narrow white tips, forming two white alar bars; under wing-coverts brown, edged with rufous, the central ones and axillaries dull grey; primaries and tail-feathers dark brown; abdomen almost uniform brown: bill and feet as in the male.

Young in first plumage closely resemble adult females, but the two white alar bars are very indistinct, and the margins of all the feathers are grey instead of brown-chestnut. *Males* may be distinguished from *females* by the nearly black sides of their heads.

Males in first nuptial dress may be distinguished by the remains of greyish-brown feathers on both the white and black parts.

Males in moulting-dress closely resemble males in first plumage, but generally have some white and black feathers of the nuptial dress remaining.

Young in down have the upper parts dark brown, and the under-parts, as well as a broad streak over each eye, pale brown.

The American Eider Duck, so far as I can see, is scarcely different from the European; but, according to Mr. Ridgway, it differs in having the "bill orange-yellowish in life; the breast paler buff, the tertials more falcate." As to the dimensions of the bill, I cannot find that there is any constant difference.

Hab. Arctic regions of the Western Palæarctic Region, from Iceland eastwards as far as the shores of the Kara Sea; it migrates in winter to the Baltic, the shores of the North Sea, and the English Channel; occasionally straying to Southern Europe. The Nearctic form, doubtfully distinct, inhabits Eastern Arctic America, including Greenland; south to Northern Labrador in summer, and to the northern boundaries of United States in winter.

a–d. ♂ ♀ ad. sk.	No locality.	Purchased.
e. Pull. st.		Purchased.
f, g. ♀ ad. et ♂ imm. st.	Reawick, Shetlands, Aug.	Theodore Fisher, Esq. [P.].
h, i, k. ♂ ♀ ad. et pull. st.	Damsa Holm, Orkneys.	Purchased.
l. ♂ juv. sk.	Stromness, Orkneys, Oct. (*J. H. Dunn*).	Seebohm Coll.

m. Pull. sk.	Stromness, Orkneys, June (*J. H. Dunn*).	Gould Coll.
n. ♀ ad. sk.	St. Kilda, June (*C. Dixon*).	Seebohm Coll.
o. Imm. sk.	St. Kilda.	Theodore Walker, Esq. [P.].
p, *q*. ♂ ♀ ad. st.	South Uist.	Theodore Walker, Esq. [P.].
r, *s*. ♂ ♀ ad. st.	Island of Coll, May.	Colonel Irby [P.].
t. ♂ ad. sk.	Farn Is., March.	Seebohm Coll.
u. ♀ ad. sk.	Beadnell, March.	Seebohm Coll.
v, *w*, *x*. ♂ ♀ ad. et pull. sk.	Bodö, Norway.	Salvin-Godman Coll.
y. ♂ ad. sk.	Lat. 79° 30′ N., Long. 4° E.	Capt. D. Gray [P.].
z. ♂ ad. st.	Spitsbergen.	The Admiralty [P.].
a′, *b′*. ♂ ♀ ad. sk.	Spitsbergen, July, Aug.	McCormick Bequest.
c′. ♂ juv. sk.	Nameless Bay, Nova Zembla, June.	
d′, *e′*, *f′*. Skeletons.		
g′–*m′*. Sterna.		M. Lefebvre Coll.

N. America.

n′, *o′*. ♂ ♀ ad. st.	N. America.	Old Coll.
p′. Juv. sk.	N. America.	H. J. Elwes, Esq. [P.].
q′. ♀ ad. sk.	N. America.	B. R. Ross, Esq. [P.].
r′. ♂ ad. st.	Repulse Bay.	Dr. J. Rae [P.].
s′. ♀ ad. sk.	Cape Fraser, Aug. (*H. W. Feilden*).	Voy. H.M.S. 'Alert.'
t′. Pull. sk.	Dobbin Bay, Sept. (*H. W. Feilden*).	Voy. H.M.S. 'Alert.'
u′. Pull. sk.	Franklin Pierce Bay, Aug. (*H. W. F.*).	Voy. H.M.S. 'Alert.'
v′. ♀ ad. sk.	Mouth of the river Ungava, June (*L. M. Turner*).	Salvin-Godman Coll.
w′. ♀ ad. sk.	Fort Chimo, Ungava, June (*L. M. T.*).	Salvin-Godman Coll.
x′. ♀ ad. sk.	Godbout, Canada, (*N. A. Comeau*).	Salvin-Godman Coll.
y′–*b″*. ♂ ♀ ad. et juv. sk.	Greenland.	Hume Coll.
c″–*f″*. ♂ ♀ ad. sk.	Whalefish I., Disco Bay, Greenland.	Dr. Robertson [P.].

3. Somateria v-nigrum.

Anas mollissima, part., *Pall. Spicil. Zool.* v. p. 28 (Kamtschatka) (1769).

Anas cutberti, part., *Pall. Zoogr. Rosso-As.* ii. p. 235 (Kamtschatka, America?) (1811).

Somateria v-nigra, *G. R. Gr. P. Z. S.* 1855, p. 212, pl. cvii. (♂, ♀, and moulting ♂) (Kotzebue Sound); *Baird, B. N. Am.* p. 810 (1858); *id. Cat. N. Am. B.* n. 607 (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 229 (Great Slave Lake); *Ross, Canadian Nat.* vii. p. 153 (Great Slave Lake) (1862); *id. Nat. Hist. Rev.* (2) i. p. 288

(1862); *Elliot, Illustr. Am. B.* pl. 48. (pts. xiv., xv., 1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 300 (1869); *Coues, Key*, p. 293 (1872); *id. Check-list*, n. 514 (1873); *id. B. N.-West*, p. 581 (1874); *Dall, Avif. Aleut. Isl. Unal. westw.* p. 7 (1874); *Ridgw. Nom. N. Am. B.* n. 628 (1881); *Coues, Check-list*, 2nd ed. p. 116, n. 735 (1882); *Bean, Pr. U.S. Nat. Mus.* 1882, p. 167; *?Stearns, Pr. U.S. Nat. Mus.* 1883, p. 121 (Labrador); *Nelson, Cruise 'Corwin,'* p. 101 (1883); *Saund. Yarrell's Hist. Brit. B.* iv. p. 459 (1884–85); *Seeb. Hist. Brit. B.* iii. p. 617 (1885); *Turner, Auk*, 1885, p. 158; *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 173, pl. vii. f. 3 (head, Copper Island) (1885); *Murdoch, Exped. to Point Barrow, Alaska*, p. 119 (1885); *Matschie u. Ziemer, J. f. O.* 1885, p. 192; *A. O. U. Check-list N. Am. B.* p. 123, n. 161 (1886); *Turner, Contr. N. H. of Alaska*, p. 136 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 78, pl. v. f. 2 (head) (1887); *Ridgw. Man. N. Am. B.* p. 110 (1887); *Stejn. Pr. U.S. Nat. Mus.* x. p. 137 (1887) (Copper Isl. and Bering Isl.); *Macfarl. Pr. U.S. Nat. Mus.* xiv. p. 422 (Franklin Bay) (1891); *?Snow, Auk*, 1892, p. 198 (Kansas!); *Allen, Auk*, 1893, p. 123.

Somateria v-nigrum, *Bp. Compt. Rend.* xliii. p. 650, n. 124 (1856); *Selys, Bull. Ac. Roy. Brux.* xxiii. 2, p. 16 (1856); *Blakist. Ibis*, 1863, p. 150; *G. R. Gr. Hand-list*, iii. p. 88, n. 10707 (1871); *Adams, Ibis*, 1878, p. 434 (Michalski); *Salv. & Sclat. Ibis*, 1881, p. 491; *Rchnw. Orn. Centralbl.* 1882, p. 18; *Saund. Ibis*, 1883, p. 347; *Stejn. Naturen*, 1884, p. 51; *B., B., & R. Water-B. N. Am.* ii. p. 80 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 712, n. 735 (1884); *Edd. Ibis*, 1886, p. 202 (note).

Somateria mollissima, *Tacz.* (*nec Linn.*) *Orn. Faun. Vost. Sibir.* p. 71 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 48 (1877).

Similar in plumage to *S. mollissima* and *S. dresseri*, but the *adult male* has a V-shaped mark of black on throat, like the male of *S. spectabilis*; besides, the male has the black of head bordered beneath by pale green for nearly its entire length, like *S. dresseri*: bill of adult male bright orange or orange-red in life, with paler tip. Wing 11·75–12·75 inches, culmen 1·80–2·20, length of bill to point of basal angle 2·50–3·10, tarsus 2·00–2·30.

The *adult female* is very similar to that of the allied species, but it is somewhat larger; wing 11·50–12·50.

Young in down. Very similar to the same stage of *S. mollissima*, but apparently paler brown, and with the feathered portion of the culmen narrower and more pointed.

Hab. North-western America, east to Great Slave Lake; north-eastern Asia.

a, b. ♂ ad. sk.	No locality.	Old Coll.
c, d, e. ♂ ♀ ad. st. et ♂ imm. sk.	Russian America (*Adams*).	Voy. of H.M.S. 'Enterprise.' (Types of the species.)
f, g. Pull. st.	Russian America (*Adams*).	Voy. of H.M.S. 'Enterprise.'
h. ♂ ad. sk.	Kotzebue Sound.	Capt. Kellett & Lieut. Wood [P.]. (Co-type of the species.)

i–p. ♂ ♀ ad., juv., et pull. sk.	St. Michael's, Alaska, June–Aug. (*E. W. Nelson*).	Salvin-Godman Coll.
q. ♀ ad. sk.	St. Michael's, Alaska, June (*C. Pease*).	Salvin-Godman Coll.
r, s. Juv. sk.	Stewart's I., Alaska, Sept. (*E. W. Nelson*).	Salvin-Godman Coll.
t. ♀ ad. sk.	Cape Sabine, Alaska, Aug. (*Hart*).	The Admiralty [P.].
u. ♀ ad. sk.	Arctic coast, E. of Ft. Anderson, July (*R. MacFarlane*).	Salvin-Godman Coll.

4. Somateria spectabilis.

Grey-headed Duck, *Edw. Nat. Hist. of Birds*, iii. pl. 154 (1750) (Hudson's Bay).

Anas freti hudsonis, *Briss. Orn.* vi. p. 366 (1760).

Anas spectabilis, *Linn. S. N.* i. p. 195, n. 5 (1766); *Penn., Cook's Voy. Pacif.* iii. p. 356 (1784); *Sparrm. Mus. Carlson.* fasc. ii. t. 39 (♂), t. 40 (♀) (1786); *Gm. S. N.* i. 2, p. 507, n. 5 (1788); *Lath. Ind. Orn.* ii. p. 845, n. 36 (1790); *Bonn. Enc. Méth.* i. p. 125, pl. 31. f. 3 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 236 [tab. lxvii.] (1811); *Vieill. N. D.* v. pp. 112, 162 (1816); *Dum. Dict. Sc. Nat.* vi. p. 352 (1817); *Sabine, Linn. Trans.* xii. p. 553 (Greenland) (1818); *Temm. Man. d'Orn.* 2nd ed. ii. p. 851 (1820); *Yarrell, Linn. Trans.* xv. 2, p. 391, pl. xv. *c*, *d* (trachea) (1827); *Less. Man. d'Orn.* ii. p. 415 (1828); *id. Tr. d'Orn.* p. 631 (1831); *Temm. l. c.* iv. p. 541 (1840); *Naum. Vög. Deutschl.* xii. p. 285, Taf. 322. f. 1 (young), Taf. 323 (1844); *Schleg. Rev. Crit.* p. cxvi (1844); *Middend. Sibir. Reis.* ii. p. 233, Taf. xxii. f. 1 (pullus), f. 2 (egg) (1853); *Münter, J. f. O.* 1853, p. 207 (Inseln Ruden); *Schrader, J. f. O.* 1853, p. 322 (Lapland); *Swinh. P. Z. S.* 1863, p. 324 (China); *Homey. J. f. O.* 1870, p. 432; *Gieb. Thes. Orn.* i. p. 362 (1872).

Canard à tête grise, *Buff. Hist. Nat. Ois.* ix. p. 253 (1783).

Bering Goose, *Penn. Arct. Zool.* ii. p. 548, n. 475 (1785); *Lath. Syn.* iii. 2, p. 465, n. 24 (1785).

King Duck, *Penn. Arct. Zool.* ii. p. 554, n. 481 (1785); *Lath. Syn.* iii. 2, p. 473, n. 30 (1785).

Anas beringii, *Gm. S. N.* i. 2, p. 508, n. 63 (1788); *Lath. Ind. Orn.* ii. p. 843, n. 29 (1790).

Anser beringii, *Bonn. Enc. Méth.* i. p. 121 (1790); *Vieill. N. D.* v. p. 329 (1818); *Steph. Gen. Zool.* xii. 2, p. 37 (1824).

Anas mollissima, part., *Temm. Man. d'Orn.* p. 549 (1815); *Vieill. N. D.* v. p. 112 (1816); *Dum. Dict. Sc. Nat.* xiv. p. 271 (part.) (1817).

Somateria spectabilis, *Leach, in Ross's Voy. Disc.*, Append. p. xlviii (1819); *Flem. Phil. of Zool.* ii. p. 260 (1822); *Boie, Isis*, 1822, p. 563, n. 399; *Steph. Gen. Zool.* xii. 2, p. 229 (1824); *Boie, Isis*, 1826, p. 980; *Sw. & Rich. Faun. Bor.-Am.* ii. p. 447 (1831); *Jen. Man.* p. 238 (1835); *Sw. Class. B.* ii. p. 368 (1837); *Gould, B. Eur.* v. pl. 375 (1837); *Eyt. Mon. Anat.* p. 148 (1838); *Bp. Comp. List*, p. 57 (1838); *K. & B. Wirbelth. Eur.* pp. lxxxvi, 228 (1840); *Macgill. Man.* ii. p. 178 (1842); *Hartl. Verz. Ges. Mus.* p. 120 (1844); *G. R. Gr. List B. Brit. Mus.* p. 141 (1844); *id. Gen. B.* iii. p. 624, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 83. ff. 147–151 (1845); *Holb. Fauna Grönl.* (*Paulsen transl.*), p. 75

(1846); *Blyth, Cat. B. Mus. A. S. B.* p. 307, n. 1790 (1849) *Bp. Compt. Rend.* xliii. p. 650, n. 125 (1856); *Baird, B. N. Am.* p. 810 (1858); *id. Cat. N. Am. B.* n. 608 (1859); *Evans & Sturge, Ibis*, 1859, p. 174 (Spitsbergen ?); *Wheat. Ohio Agric. Rep.* no. 259 (Lake Erie !) (1860); *Reinh. Ibis*, 1861, p. 14 (Greenland); *Torell, Bidrag till Spitsberg. Molluskf. etc.* p. 57 (1859); *Verr. Pr. Ess. Inst.* iii. p. 159 (1862); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 140 (1862); *Cass. Pr. Philad. Acad.* 1862, p. 323; *H. C. Müll. Vid. Medd.* (2) iv. p. 33 (Faeroe Isl.) (1862); *Blakist. Ibis*, 1863, p. 150 (Hudson's Bay); *G. R. Gr. List Brit. B.* p. 206 (1863); *Malmgren, Œfv. K. Vet.-Ak. Förh.* 1863, p. 109 (Spitsbergen), 1864, p. 401; *id. J. f. O.* 1863, p. 380; *Newt. Ibis*, 1865, p. 516 (Spitsbergen); *Lawr. Ann. Lyc. N. Y.* viii. p. 298 (1866); *Baird, Ibis*, 1867, p. 286; *Degl. & Gerbe, Orn. Eur.* ii. p. 557 (1867); *Coues, Pr. Ess. Inst.* v. p. 201 (1868); *Collett, Vid. Selsk. Förhandl.* 1868, p. 181 (Norway), *cf. J. f. O.* 1869, p. 394; *Dall & Bann. Tr. Chic. Acad.* i. p. 301 (1869); *Turnb. B. E. Pa.* p. 46 (New Jersey in severe winters) (1869); *Eyton, Syn. Anat.* p. 105 (1869); *Boie, J. f. O.* 1869, p. 97 (Lofoten); *S. Müller, ibid.* p. 348 (Färoe); *Gould, B. of Great Brit.* v. pl. 27 (1870); *Gillett, Ibis*, 1870, p. 309 (Novaja Semlja); *Harting, P. Z. S.* 1871, p. 118, f. 1 (head of the ♀); *G. R. Gr. Hand-list*, iii. p. 88, n. 10708 (1871); *Heugl. Peterm. Geogr. Mitth.* 1871, pp. 59, 65; *id. J. f. O.* 1871, p. 105 (Spitsbergen); *id. Ibis*, 1872, p. 63 (Novaja Semlja); *id. J. f. O.* 1872, p. 122; *Feild. Zoolog.* 1872, p. 3255 (Faeroe I.); *Sundev. Meth. nat. Av. disp. Tent.* p. 149 (1872); *Coues, Key N. Am. B.* p. 293 (1872); *id. Check-list*, n. 155 (1873); *Finsch, Zweite Deutsche Nordpolfahrt*, ii. p. 215 (1873); *Dall, Avif. Aleut. Isl. Unal. Eastw.* p. 6 (1873); *Coues, Birds N.-West*, p. 581 (1874); *Tacz. Bull. Soc. Zool. Fr.* ii. p. 48 (1877); *id. Orn. Faun. Vost. Sibir.* p. 71 (1877); *Feild. P. Z. S.* 1877, pp. 30, 32 (W. of Cape Union); *id. Ibis*, 1877, p. 412 (Floeberg Beach, lat. 82° 27′ N.); *Dress. B. of Eur.* vii. p. 643, pl. 446 (1877); *Seeb. Ibis*, 1879, p. 161 (Siberia); *Reinh. Vid. Medd.* 1879, p. 205; *Sclat. P. Z. S.* 1880, p. 528; *Brandt, J. f. O.* 1880, p. 249 (note); *Henshaw, Bull. Nutt. Orn. Club*, v. p. 189 (Californian coast) (1880); *Comeau, Canad. Sportsm. and Natural.* i. no. 7, p. 51 (nesting on a small island near Mingan) (1881); *Ridgw. Nom. N. Am. B.* n. 629 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 18; *id. Vög. zool. Gärt.* p. 49 (1882); *Seeb. Ibis*, 1882, p. 383 (Kanin Peninsula); *Coues, Cat. B. Strickl. Coll.* p. 540 (Iceland) (1882); *Bean, Pr. U.S. Nat. Mus.* 1882, p. 167; *Palmén, Intern. Fish. Exhib. London*, 1883, *Sweden Spec. Cat.* p. 199 (1883); *Saund. Ibis*, 1883, p. 341; *Nelson, Cruise 'Corwin,'* p. 101 (1883); *Stearns, Pr. U.S. Nat. Mus.* 1883, p. 121 (Labrador); *B. O. U. List Brit. B.* p. 134 (1883); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (Kamtschatka) (1883); *B., B., & R. Water-Birds N. Am.* ii. p. 83 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 463 (1884–85); *Dixon, Ibis*, 1885, p. 88 (St. Kilda); *Sech. Hist. Brit. B.* iii. p. 621, pl. 59 (egg) (1885); *Matschie u. Ziemer, J. f. O.* 1885, p. 192; *Murdoch, Exped. to Point Barrow, Alaska*, p. 120 (1885); *Stejneg. Orn. Expl. of the Comm. Isl. and Kamtschatka*, p. 318 (1885); *A. O. U. Check-list N. Am. B.* p. 123, n. 162 (1886); *Turner, Contr. N. H. of Alaska*, p. 137 (1886); *Payne, Pr. Canad. Inst.* (3) v. p. 122 (Prince of Wales's Sound, Hudson's Strait) (1887); *Nelson, Nat. Hist. Coll. in Alaska*, p. 79 (1887); *Murdoch, Zoologist*, 1887, p. 108 (Point Barrow); *Ridgw.*

Man. N. Am. B. p. 110 (1887); *Leverk. J. f. O.* 1887, p. 85 (var.); *Stejneg. Pr. U.S. Nat. Mus.* 1887, p. 138; *Ninni, Bollett. del Natural.* 1888, p. 137 (Venetian); *Seeb. Ibis*, 1888, p. 351 (Great Liakoff Isl.); *Hartw. J. f. O.* 1889, p. 153; *Tristr. Cat. Coll. B.* p. 47 (Labrador) (1889); *Seeb. B. Jap. Emp.* p. 256 (Kurile Is.) (1890); *Rchnw. J. f. O.* 1890, p. 83; *Walter, ibid.* pp. 235, 236, 238, 239, 243, 245, 247 (E. Spitsbergen); *Macfarl. Pr. U.S. Nat. Mus.* 1891, p. 422 (Franklin Bay); *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Southwell, Tr. Norw. Soc.* v. pp. 58, 60 (Norfolk) (1891); *Seeb. Ibis*, 1892, p. 28 (Heligoland); *Hatch, B. of Minnes.* p. 68 (1892); *Allen, Auk*, 1893, p. 123; *W. S. J., Forest and Stream*, 1893, p. 96 (Maine); *Mackay, Auk*, 1894, p. 224; *Whitfield, ibid.* p. 323; *Collett, Mindre Medd. vedr. Norges Fuglef.* 1881–92, p. 287 (1894).

Platypus spectabilis, *Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 816 (1824); *Böck, J. f. O.* 1853, p. 371.

Fuligula spectabilis, *Bp. Ann. Lyc. N. Y.* ii. p. 389, n. 332 (1826); *id. Syn.* p. 389 (1828); *id. Isis*, 1832, p. 1188; *Aud. Orn. Biogr.* iii. p. 523, pl. 276; *id. Syn.* p. 291 (1839); *Selys-L. Faun. Belg.* i. p. 143 (1842); *Aud. B. Am.* vi. p. 347, pl. 404 (1843); *De Kay, N. Y. Zool.* ii. p. 334 (1844); *Giraud, B. Long Isl.* p. 333 (1844); *Degl. Orn. Eur.* ii. p. 466 (1849); *Schleg. Mus. P.-B.*, Anseres, p. 13 (1866); *Palmén, J. f. O.* 1876, p. 57 (Finland); *Brandt, J. f. O.* 1891, p. 268 (Sitka and Aleutians).

Fuligula (Somateria) spectabilis, *Nutt. Man.* ii. p. 414 (1834); *Brandt, Mém. Ac. St. Pétersb.* (6) (*Sc. Nat.*) vi. 1849, p. 5 (1847).

Somateria pectoralis (*errore?*), *Licht. Nomencl. Av.* p. 103 (1854) (Greenland).

Somateria megarhynchus, *Brehm, Vogelf.* p. 389 (1855); *id. Naumannia*, 1855, p. 299.

Somateria altensteini, *Brehm, Vogelf.* p. 389 (1855); *id. Naumannia*, 1855, p. 299.

"Anas superba, *Leach, Syst. Cat.* 1816*," *fide B., B., & R. Water-Birds N. Am.* p. 83 (1884).

Somateria (Erionetta) spectabilis, *Coues, Key N. Am. B.* 2nd ed. pp. 709, 712, n. 736 (1884).

Adult male. Top of the head and the occiput French-grey, which on the occiput is darker and is surrounded below with a blackish line; a black line of feathers surrounds the base of the bill from the culmen to the gape; a black spot under the eyes; cheeks white, tinged with sea-green above, this colour extends in a line of a crescentic shape, together with a white one, on the sides of the head; throat, upper neck, and upper back white; on the throat there is a black V-shaped mark pointing towards the chin; breast creamy buff; lower back, middle of the rump, upper tail-coverts, and lower parts brown-black; on the sides of the rump a large white patch; upper wing-coverts white, but the point of the wing and the greater coverts, like the scapulars and quills, brown-black; scapulars very broad, with the outer web ending in a sickle form; tertials pointed and bent downward; under wing-coverts dark grey, tipped with white; axillaries white; tail brown-black: bill, with base of the

* The name *Anas superba* is not to be found in Leach's Catalogue.

upper mandible spread out into a shield on each side, reddish orange-colour; irides yellow; legs and feet orange-red, membrane darker. Total length about 24 inches, wing 11·5, tail 4·25, culmen 1·25, tarsus 1·75.

Female. Resembles that of *S. mollissima*, but is ruddier and smaller, and besides may be distinguished by the central line of feathers on the culmen running down to the nostrils, while in the Common Eider it hardly reaches halfway. General plumage foxy rufous; head and neck with narrow black streaks; feathers of the back and upper wing-coverts with black centres; breast and flanks with crescentic black bands; lower breast and abdomen darker; greater wing-coverts and quills blackish brown, the greater wing-coverts and secondaries with a narrow white band at the tip; tertials somewhat bent downwards and edged with rufous-brown; under wing-coverts greyish brown; axillaries white, dusted with grey; tail blackish brown: bill greenish brown; iris dull yellow; feet dull ochre. Total length 22·5 inches, wing 10·5, culmen 1·25.

Young in first plumage resembles the females, but has traces of the dark lines on the throat and margin of the bill (*Seebohm*).

Males in first nuptial dress have very small shields at the base of the bill, and only a few of the wing-coverts are white.

Males in moulting dress closely resemble males in first plumage, but may be distinguished by the broader shields at the base of the bill.

Young in down has the bill narrower than in the Common Eider; the down of the central ridge runs down to the nostrils in the same characteristic manner as the feathers in the adult; the upper parts are only a trifle more rufous, but the cheeks, throat, and underparts are much lighter and yellower than in the Common Eider.

Hab. Arctic regions of the Northern Hemisphere; in America, occasionally in winter to New Jersey, the Great Lakes, and California; in Europe, rarely in the British Islands, France, and Scandinavia.

a, b ♂ ad. sk.	No locality.	
c. ♂ imm. sk.	N. America.	H. J. Elwes, Esq. [P.].
d–h. ♂ ♀ ad., ♂ juv. et pull. sk.	N. America.	Capt. Collinson [P.].
i, k. ♂ ad. et ♂ juv. sk.	Kodiak Island, Alaska, Dec. (*W. J. Fisher*).	Salvin-Godman Coll.
l, m, n. ♂ ad., ♀ juv., et ♂ imm. sk.	Whalefish Island (*Dr. Robertson*).	The Admiralty [P.].
o. ♀ ad. sk.	Franklin Bay, July (*R. MacFarlane*).	Salvin-Godman Coll.
p, q. ♂ ad. sk. et ♀ ad. st.	Repulse Bay.	Dr. J. Rae [P.]
r, s. ♂ ♀ ad. sk.	Lat. 82° 30′, June (*H. W. Feilden*).	The Admiralty [P.].

t. ♂ imm. sk.	Lat. 70° N., Long. 68° 30′ W. (*Feilden*).	H. W. Feilden [P.].
u. ♂ ad. sk.	Godbout, Canada, Jan. (*N. A. Comeau*).	Salvin-Godman Coll.
v. ♂ juv. sk.	Chicago Market (imported from Calumet Marshes), Dec.	Salvin-Godman Coll.
w. ♀ ad. sk.	Discovery Bay, July.	J. Hart, Esq. [C.].
x. Juv. sk.	Greenland.	Tweeddale Coll.
y. ♂ ad. sk	Greenland.	Hume Coll.
z. ♀ ad. sk.	Greenland.	Gould Coll.
a′, *b′*, *c′*. ♂ ♀ ad. st.	Greenland.	Holböll Coll.
d′. ♂ imm. sk.	Nanortalik, Greenland, Feb. (*R. Müller*).	Hargitt Coll.
e′, *f′*. ♂ ad. sk.	Nanortalik, Greenland, Feb., March (*R. Müller*).	Seebohm Coll.
g′, *h′*. ♀ ad. et juv. sk.	S. Greenland, Dec., Jan.	Dr. R. Bowdler Sharpe [P.].
i′. ♂ ad. st.	Orkneys.	W. Parke, Esq. [P.].
k′. ♂ juv. sk.	Nova Zembla, June.	
l′. Pull. st.	No locality.	Purchased.

Subfamily IX. ERISMATURINÆ.

Key to the Genera.

a. Bill about the length of the head; no pendent lobe on the chin; tail-feathers less than 24.
  a′. Nail of the bill perpendicular.
    a″. Tail shorter than tarsus ..... 55. THALASSIORNIS, p. 436.
    b″. Tail longer than tarsus..... 56. NOMONYX, p. 438.
  b′. Nail of the bill bent inwards; tail of 18 feathers ..... 57. ERISMATURA, p. 441.
b. Bill shorter than the head, very high at base; a pendent lobe on the chin; tail-feathers 24 ..... 58. BIZIURA, p. 452.

55. THALASSIORNIS.

	Type.
Thalassornis, *Eyt. Mon. Anat.* p. 70 (1838).....	T. leuconota.
Thalassiornis, *G. R. Gr. Gen. B.* iii. p. 626, pl. 169. f. 1 (1844).	

Range. Confined to the Southern part of Africa.

1. Thalassiornis leuconota.

Clangula leuconotus, *Smith, Cat. S. Afr. Mus.* p. 37, n. 328 (1837) (descr. nulla), *undè*:—

Thalassornis leuconotus, *Eyt. Mon. Anat.* p. 168 (Cape of Good Hope) (1838); *Gurn. Ibis*, 1861, p. 134, 1862, p. 39 (Natal); *Eyt. Syn. Anat.* p. 126 (1869).

Thalassiornis leuconotus, *G. R. Gr. & Mitch. Gen. B.* iii. p. 626, pl. 169. f. 1 (1844); *Rchnb. Syn. Av.*, Natatores, t. 79. ff. 2328–29 (1850); *id. Av. Syst. Nat.* p. viii, tab. viii. (1852); *Pelz. Reise Novara, Vög.* p. 139 (1865) (Cape of Good Hope); *Finsch u. Hartl. Vög. O.-Afr.* p. 810 (1870); *Hartert, Kat. Vogelsamml.* p. 234 (1891).

Clangula leuconotus, *Smith, Ill. S. Afr., Zool.*, Aves, pl. 107 (1846).

Anas brevipennis, *Licht. Mus. Berol., teste G. R. Gr. Gen. B.*, App. p. 28 (1849).

Thalassiornis leuconota, *Licht. Nomencl. Av.* p. 103 (1854); *Cab., v. d. Deck. Reise O.-Afr.* p. 51 (1869); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Rchnw. J. f. O.* 1887, p. 46 (Njansa); *Matschie, J. f. O.* 1887, p. 157; *Rchnw. J. f. O.* 1889, p. 265 (Quilimane); *id. Mitth. Naturh. Mus. zu Hamb.* x. p. 5 (Quilimane) (1893); *id. Vög. Deutsch-Ost-Afr.* p. 25 (1894).

Thalassornis leuconota, *Bp. Compt. Rend.* xliii. p. 658, n. 156 (1856); *Hartl. J. f. O.* 1860, p. 174; *id. Orn. Beitr. Faun. Madag.* p. 83 (1861); *Pollen, N. T. D.* i. p. 328 (1863); *Verr. in Vinson's Voy. à Madag.*, App. B, p. 4 (1865); *Layard, Birds of S. Afr.* p. 356 (1867); *Grand. Rev. et Mag. de Zool.* 1868, p. 6 (Madagascar); *G. R. Gr. Hand-list*, iii. p. 90, n. 10717 (1871); *Boc. Jorn. Acad. Sc. Lisb.* 1872, p. 70 (Rio Coroca); *Ayres, Ibis*, 1874, p. 105 (Transvaal); *Boc. u. Gad. J. f. O.* 1876, p. 294; *Rchnw. J. f. O.* 1877, p. 11 (Loango); *Hartl. Die Vög. Madag.* p. 366 (1877); *Sclat. P. Z. S.* 1880, pp. 529, 534; *Fisch. u. Rchnw. J. f. O.* 1880, p. 139 (Zanzibar); *Boc. Orn. Angola*, p. 505 (1881); *Butl., Feild., & Reid, Zoolog.* 1882, p. 428 (Natal); *Böhm, J. f. O.* 1882, p. 184 (Zanzibar); *Milne-Edw. & Grandid. Ois. Madag.* p. 735, pl. 275 A. f. 2 (1882); *Sharpe, Layard's B. of S. Afr.* p. 761 (1884); *Böhm, J. f. O.* 1885, p. 38 (Ugalla, C. Afr.); *Fischer, J. f. O.* 1885, p. 115; *Symonds, Ibis*, 1887, p. 336 (Orange Free State); *Salvad. Ann. Mus. Civ. Gen.* (2) vi. p. 324 (Shoa) (1888); *Tristr. Cat. Coll. B.* p. 46 (1889); *Sibree, Ibis*, 1892, pp. 265, 271; *Nicholls & Eglington, Sportsm. in S. Afr.* p. 125 (note) (1893).

Erismatura leuconota, *Mont. P. Z. S.* 1865, p. 89 (Benguela).

Biziura leuconota, *Schleg. Mus. P.-B.* Anseres, p. 8 (1866); *Gieb. Thes. Orn.* i. p. 467 (1872).

Clangula leuconota, *Chapm. Trav. in S. Afr.* ii. App. p. 423 (1868).

Anas leuconotus, *Gieb. Thes. Orn.* i. p. 355 (1872).

Erismatura (Thalassiornis) leuconota, *Rchnw. Orn. Centralbl.* 1882, p. 4.

Anas sp., *Böhm, J. f. O.* 1885, p. 51, 1887, p. 157 (=? leuconota).

Adult male. Upper part of the head, nape, and throat black, varied with yellow-ochreous; a buffy-white spot at the anterior part of the cheeks just near the base of the bill, extending to below the gape; sides of the head ochreous yellow, with black roundish spots; sides and anterior part of the upper neck uniform bright ochreous yellow; back, scapulars, and wing-coverts with black and rufous-ochreous bands; rump white; upper tail-coverts black, with buff bands; underparts ochreous yellow, the jugulum, sides of the breast, and flanks banded with black, the black bands broader on the flanks; centre of the breast uniform, unspotted; abdomen and under tail-coverts dusky, the edges of the feathers buff; primaries greyish brown, the secondaries spotted with rufous on the edges;

under wing-coverts brown-grey, the marginal ones tinged with buff; axillaries buff, with a brown stripe along the middle; tail-feathers blackish brown, with narrow ochreous edges: "bill blue and slate colour, lower mandible yellowish; irides dark brown; feet dark brown" (*Ayres*). Total length 16–17 inches, wing 7, tail 2·5, culmen 1·7, tarsus 1·3.

Female. Similar to the male.

Young. Similar to the adult, but less ochreous and more brown on the abdomen.

Hab. Southern Africa, north to Loango on the western coast, and to Shoa on the eastern; Madagascar.

a. Ad. st.	Africa.	E. Wilson, Esq. [P.].
b, *c*, *d*. Ad. et juv. st.	S. Africa.	Sir A. Smith [P.]. (Types of the species.)
e. Juv. sk.	S. Africa.	Sir A. Smith [P.].
f. Juv. sk.	S. Africa.	Eyton Coll.
g, *h*. ♂ ad. sk.	Newcastle, Natal, Sept.	Shelley Coll.
i. ♀ ad. sk.	Newcastle, Natal, Sept.	Capt. Savile Reid [C.].
k. ♂ ad. sk.	Kroonstad, Orange Free State, March (*E. T. Symonds*).	J. H. Gurney, Esq. [P.].
l. Ad. sk.	Transvaal (*T. Ayres*).	Shelley Coll.
m. Juv. sk.	Benguela.	J. Monteiro [C.].

56. NOMONYX.

Type.

Nomonyx, *Ridgw. Pr. U. S. Nat. Mus.* iii. p. 15 (1880). N. dominicus.

Range. Tropical America, including the West Indies.

1. Nomonyx dominicus.

Querquedula dominicensis, *Briss. Orn.* vi. p. 472, pl. xli. f. 2 (1760) (San Domingo et Mexico).

Anas dominica, *Linn. S. N.* i. p. 201, n. 22 (1766) (*ex Brisson*); *Gm. S. N.* i. 2, p. 521, n. 22 (1788); *Lath. Ind. Orn.* ii. p. 874, n. 102 (1790); *Bonn. Enc. Méth.* i. p. 157, n. 80 (1791); *Vieill. N. D.* v. p. 175 (1816); *Dum. Dict. Sc. Nat.* vi. p. 400 (1817); *Wied, Beschr. Reise nach Bras.* ii. p. 199 (1821) (Brazil); *Less. Tr. d'Orn.* p. 632 (1831) (Porto Rico); *Wied, Beitr.* iv. p. 938 (1832) (Bahia); *Burm. Syst. Ueb.* iii. p. 439 (1856) (Lakes of S.E. Brazil); *Sundev. Œfv. K. Vet.-Akad. Förh.* 1869, p. 603 (Porto Rico).

Sarcelle à queue épineuse, de Cayenne, *D'Aubent. Pl. Enl.* 967 (♀); *Buff. Hist. Nat. Ois.* ix. p. 282 (1783).

Sarcelle de la Guadeloupe, *D'Aubent. Pl. Enl.* 968 (♂).

Sarcelle rousse à longue queue, *Buff. Hist. Nat. Ois.* ix. p. 283 (1783).

St. Domingo Teal, *Lath. Syn.* iii. 2, p. 554, n. 91 (1785).

Spinous-tailed Duck, *Lath. Syn.* iv. 2, p. 555, n. 92 (1785).

Anas spinosa, *Gm. S. N.* i. 2, p. 522, n. 87 (1788) (Cayenne et Guiana); *Lath. Ind. Orn.* ii. p. 874, n. 103 (1790); *Bonn. Enc. Méth.* i. p. 157, n. 81, pl. 41. f. 3 (1791); *Vieill. N. D.* v. p. 175 (1816); *Dum. Dict. Sc. Nat.* vi. p. 400 (1817); *D'Orb. in La*

Sagra's Hist. Nat. Cuba, Ois. p. 297 (1840) (Cuba et Bolivia); *Burm. Syst. Uebers.* iii. p. 440 (1856).

Fuligula dominica, *Steph. Gen. Zool.* xii. 2, p. 203 (1824).

Cerconectes spinosa, *Wagl. Isis*, 1832, p. 282 (Para).

Erismatura dominica, *Eyt. Mon. Anat.* p. 172 (1838); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 146 (1844); *id. Gen. B.* iii. p. 627, n. 6 (1844); *Rchnb. Syn. Av.*, Natatores, t. 78. ff. 900–901 (1848); *Licht. Nomencl. Av.* p. 103 (1854) (Montevideo, Chili); *Bp. Compt. Rend.* xliii. p. 625, n. 162 (1856); *Cab. & Gundl. J. f. O.* 1857, p. 231 (Cuba); *Sclat. P. Z. S.* 1857, p. 206 (Jalapa); *Cabot, Pr. Bost. Soc. N. H.* vi. p. 375 (1858) (Lake Champlain); *Baird, B. N. Am.* pp. 811, 925 (1858) (Lake Champlain); *id. Cat. N. Am. B.* n. 610 (1859); *A. & E. Newt. Ibis*, 1859, p. 367 (St. Croix); *Sclat. P. Z. S.* 1860, p. 254 (Orizaba); *Baird, B. N. Am.* ed. 1860, pl. 92; *Gundl. J. f. O.* 1861, p. 346, 1862, p. 93; *Ibis*, 1862, p. 289 (Martinica); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 391 (1866); *Léot. Ois. Trinid.* p. 525 (1866); *Eyt. Syn. Anat.* p. 132 (1869); *Pelz. Orn. Bras.* pp. 320, 321 (trachea), 460, lix (1870); *Reinh. Fugl. Bras. Camp.* p. 20 (*Vid. Medd.* 1870) (Lagoa dos Pitos); *Kumlien, Pr. Bost. Soc. N. H.* xiv. p. 154 (Wisconsin) (1871); *Brewer, Am. Nat.* v. p. 441 (1871); *G. R. Gr. Hand-list*, iii. p. 90, n. 10723 (1871); *Coues, Key N. Am. B.* p. 295 (1872); *id. Check-list*, n. 520 (1873); *Lee, Ibis*, 1873, p. 137 (Entrerios, Argent. Rep.); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 316 (1874) (Mexico); *Coues, B. N.-West*, p. 583 (note) (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 384 (Cuba); ? *Durnf. Ibis*, 1876, p. 163 (Argentine ?); *Sclat. & Salv. P. Z. S.* 1876, pp. 405, 411; *Gundl. Anal. Soc. Esp. Hist. Nat.* vii. p. 408 (1878) (Porto Rico); *id. J. f. O.* 1878, pp. 162, 191; *Sclat. P. Z. S.* 1880, p. 530; *Salv. Cat. B. Strickl. Coll.* p. 541 (1882); *Barrow, Auk*, 1884, p. 274 (Lower Uruguay); *Ernst, Rev. Cient. Univ. Centr. Venez.* i. p. 43 (Venezuela) (1887); *Berl. J. f. O.* 1887, p. 133 (Paraguay).

Oxyura dominica, *Eyt. Mon. Anat.* pl. 24. f. 2 (head of the female) (1838).

Erismatura spinosa, *Gosse, B. Jam.* p. 404 (1847); *Albrecht, J. f. O.* 1862, p. 207 (Jamaica).

Erismatura ortygoides, "*Hill*," *Gosse, B. Jam.* p. 406 (1847); *Gosse, Illustr. B. Jam.* pl. 113 (1849); *Rchnb. Syn. Av.*, Natatores, t. 91. f. 2653 (1850) (*ex Gosse*); *Bp. Compt. Rend.* xliii. p. 652, n. 163 (1856).

Dendrocygnus spinosa, *Brewer, Pr. Bost. Soc. N. H.* vii. p. 308 (1860) (Cuba).

Biziura dominica, *Schleg. Mus. P.-B.*, Anseres, p. 9 (1866); *Gieb. Thes. Orn.* i. p. 467 (1872).

Nomonyx dominicus, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 15 (1880); *id. Nom. N. Am. B.* n. 635 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 109 (1884); *Cory, List B. W. Ind.* p. 31 (1885); *A. O. U. Check-list N. Am. B.* p. 125, n. 168 (1886); *Ridgw. Man. N. Am. B.* p. 114, n. 125 (1887); *Cory, Auk*, 1888, p. 68; *id. B. West Ind.* p. 269 (1889); *Sclat. Argent. Orn.* ii. p. 138 (1889); *Cory, Auk*, 1889, p. 336 (Massachusetts); *Sclat. Ibis*, 1890, p. 425 (Argentine); *Scott, Auk*, 1891, p. 364 (Jamaica); *Holland, Ibis*, 1892, p. 209 (Argentine, eggs); *Cory, Auk*, 1892, p. 272 (Cuba).

Momonyx (*errore*) dominicus, *Ibis*, 1880, p. 491 (Index).

Nomonyx dominica, *Coues, Check-list N. Am. B.* 2nd ed. p. 117, n. 742 (1882); *id. Key N. Am. B.* 2nd ed. p. 715, n. 742 (1884).

Adult male. Head black; neck and breast bright rusty cinnamon, shading into reddish white on the lower parts; feathers of the back, scapulars, and feathers of the flanks broadly centred with black, the edges cinnamon; wings brown, with a white band or speculum formed by the tips of the anterior wing-coverts and by the basal portion of the anterior secondaries; some of the median wing-coverts edged with rusty cinnamon; under wing-coverts brown, with narrow whitish edges; tail black: "bill blue; nail, tip of both mandibles, and naked skin on chin black; remainder of the lower mandible reddish white; outer aspect of tarsus and two outer toes dark brown or black, the inner side of the tarsus, inner toe, and membranes pale brown, spotted with black; iris dark brown; naked skin round the eyes bluish" (*Gundlach*). Total length about 15 inches, wing 5·7, tail 4, culmen 1·26, tarsus 1.

Female. Upper parts brown; pileum uniform; a narrow superciliary stripe buff; a broader band, also buff colour, underneath the eyes from the bill to the occiput; two dark bands from the bill to occiput, one through the eyes, the other lower down, starting from the gape; throat buff; neck buff mottled with brown; feathers of the breast and flanks centred with brown, the edges buff; abdomen buff, the brown bases of the feathers more or less showing through; feathers of the back more or less edged and spotted with buff; wings brown; wing-speculum white as in the male; tail blackish: "bill horn-brown, with the tip black" (*Gundlach*). Size somewhat smaller than the male.

Young. Resembles the female, but there are no distinct brown centres to the feathers of the breast and flanks, and the whole of the lower parts have the bases of the feathers much paler brown.

Young in down. Upper parts brown, with four white patches, two on the sides of the back, behind the wings, and two on the sides of the rump; a whitish band on the posterior edge of the wings; a whitish superciliary stripe, and a similar one below the eyes; a brown band through the eyes, and another across the lower part of the cheeks; lower parts whitish.

Hab. Tropical America in general, including the West Indies, south to Chili and the Argentine Republic; accidental in Eastern North America (Wisconsin and Lake Champlain).

a. ♀ ad. sk.	Jamaica.	R. Redman, Esq. [P.].
b. ♂ juv. st.	Barbados.	P. Gosse, Esq. [C.].
c. ♂ imm. sk.	Guatemala.	Salvin-Godman Coll.
d. Juv. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.
e. Ad. st.	S. America.	Old Coll.
f, g. ♂ ♀ ad. st.	Cayenne.	Purchased.
h. ♂ ad. st.	Rio Negro.	Purchased.
i. ♀ ad. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Lake Titacaca, Bolivia.	Eyton Coll.
l. ♂ ad. sk.	Coast of Brazil.	Dr. W. Barker [P.].
m. Sternum, with shoulder-girdle.	Jamaica.	P. Gosse, Esq. [P.].

57. ERISMATURA.

	Type.
Oxyura (subgen.), *Bp. Ann. Lyc. N. Y.* ii. (1826), p. 390 (1828) (*nec* Oxyurus, *Sw.* 1827)	E. jamaicensis.
Erismatura, *Bp. Sagg. Distr. Met., Agg. e Corr.* p. 143 (1832)	E. jamaicensis.
Cerconectes, *Wagl. Isis*, 1832, p. 282	E. leucocephala.
Gymnura (subgen.), *Nutt. Man.* ii. p. 426 (1834)	E. jamaicensis.
Undina, *Gould, B. of Eur.* v. pl. 383 (1837)	E. leucocephala.
Bythonessa, *Gloger, Hand- u. Hilfsb.* p. 412 (1842).	E. leucocephala.
Erimistura (*errore?*), *Degl. & Gerbe, Orn. Eur.* ii. p. 565 (1867).	

Range. Almost cosmopolitan.

Key to the Species.

a. Breast, and usually also the back and flanks, bright chestnut (*Adult Males*).
  a'. Head partly white.
    a''. Head white, crown black ..... *leucocephala*, p. 442.
    b''. Cheeks and chin white, upper part of the head to the occiput black ..... *jamaicensis*, p. 445.
  b'. Head and upper part of the neck wholly black.
    c''. Axillaries white ..... *maccoa*, p. 448.
    d''. Axillaries greyish brown, edged with white.
      a'''. Chin white.
        a^4. Under tail-coverts rusty red ..... *ferruginea*, p. 449.
        b^4. Under tail-coverts white ..... *æquatorialis*, p. 450.
      b'''. Chin like the head black.
        c^4. Chestnut colour of the breast, flanks, and upper parts lighter and brighter ..... *vittata*, p. 450.
        d^4. Chestnut colour of the breast, flanks, and upper parts deeper ..... *australis*, p. 451.
b. Breast and upper parts not bright or deep chestnut, always more or less freckled or barred with brown (*Females* and *Young*).
  c'. Upper mandible at base decidedly swollen on the sides; usually upper parts distinctly tinged with chestnut-brown ..... *leucocephala*, p. 442.
  d'. Upper mandible not swollen basally on the sides.
    e''. Cheeks not uniform with the upper part of the head, but crossed below the eyes by a whitish band from the bill to the occiput.
      c'''. Under tail-coverts whitish, not sharply defined from the remainder of the abdomen ..... *maccoa*, p. 448.
      d'''. Under tail-coverts pure white, sharply defined from the remainder of the abdomen.
        e^4. Bill across at broadest point 0·80–0·90 inch ..... *jamaicensis*, p. 445.

f^4. Bill across at broadest point 0·75–0·80 inch ..... *vittata*, p. 450.

f''. Cheeks uniform with the upper part of the head; no white band across the cheeks.

e'''. Cheeks dark brown, almost uniform . . } *ferruginea*, p. 449.

f'''. Cheeks and upper parts of the head brown, freckled and mottled with paler markings..... } *æquatorialis*, p. 450.

australis, p. 451.

1. Erismatura leucocephala.

? White-head, *Shaw, Trav.* p. 254 (1738).

Anas leucocephalus, *Scop. Ann.* I. *Hist. Nat.* p. 65, n. 79 (1769); *Gm. S. N.* i. 2, p. 516, n. 72 (1788); *Lath. Ind. Orn.* ii. p. 858, n. 64 (1790); *Bonn. Enc. Méth.* i. p. 131 (1790); *Bechst. Orn. Taschenb.* ii. p. 444, Taf. 28 (♂) (1803); *Bechst. Gem. Naturg. Deutschl.* iv. p. 982 (1809); *Savigny, Descr. de l'Egypt, Hist. Nat.* i. pt. 4, p. 315, pl. 10. f. 2 (1809); *Temm. Man. d'Orn.* p. 556 (1815); *Dum. Dict. Sc. Nat.* vi. p. 397 (1817); *Temm. op. cit.* 2nd ed. ii. p. 859 (1820); *Ranz. El. di Zool.* iii. pt. ix. p. 137, tav. 30. f. 3 (♀) (1826); *Bp. Specch. Comp.* p. 72, n. 230 (1827); *Less. Tr. d'Orn.* p. 630 (1831); *Strickl. Ann. & Mag. N. H.* viii. p. 545 (1842); *Naum. Vög. Deutschl.* xii. p. 149, Taf. 315 (1844); *Buvry, J. f. O.* 1857, p. 131 (Algeria).

Anas mersa, *Pall. Reis. Russ. Reichs*, ii. Anh. p. 713, n. 29, t. H (1773); *Falk, Beytr. z. Top. Kennt. Russ. Reichs.* ii. p. 349, n. 75, t. 23 (1786); *Gm. S. N.* i. 2, p. 520, n. 84 (marsa) (1788); *Bonn. Enc. Méth.* i. p. 127, pl. 36. f. 6 (♂ ♀) (1790); *Pall. Zoogr. Rosso-As.* ii. p. 283, t. lxxiii. (1811); *Vieill. N. D.* v. p. 137 (1816); *Dumont, Dict. Sc. Nat.* vi. p. 376 (marsa) (1817); *Schleg. Rev. Crit.* p. cxviii (1844); *Bädek. J. f. O.* 1854, p. 370 (Volga); *Püssler, ibid.* p. 380 (Tauris); *Buvry, J. f. O.* 1857, p. 123 (Algeria).

Anas hyberna, *Gerini, Stor. Ucc.* v. t. 577 (1776).

Spanish Duck, *Penn. Gen. Birds*, p. 65, tab. xiii. (1781); *Lath. Syn.* iii. 2, p. 525, n. 69 (part.) (1785).

Anas vindila (*err.*), *Penn. Gen. Birds*, p. 65, tab. xiii. (1781).

White-headed Duck, *Lath. Syn.* iii. 2, p. 478, n. 33 (1785).

Ural Duck, *Lath. Syn.* iii. 2, p. 514, n. 59 (1785).

Anas viduata, part., *Lath. Gen. Syn.* iii. 2, p. 525, n. 69 (1785).

Anas ruthenica, *Hollandre, Abrégé d'Hist. Nat.* iv. *Ois.* p. 243 (1790).

Anas leucophela (*errore*), *Vieill. N. D.* v. p. 105 (1816).

Aythya mersa, *Boie, Isis*, 1822, p. 564.

Oidemia leucocephala, *Steph. Gen. Zool.* xii. 2, p. 218 (1824); *Flem. Brit. An.* p. 119 (1828).

Platypus leucocephalus, *Brehm, Lehrb. Naturg. eur. Vög.* ii. p. 824 (1824).

Fuligula leucocephala, *Bp. Ann. Lyc. N. Y.* ii. p. 391 (note) (1826); *id. Syn.* p. 391 (1828); *Savi, Orn. Tosc.* iii. p. 142 (1831); *Bp. Isis*, 1832, p. 1188.

Aythya leucocephala, *Boie*; *Brehm, Isis*, 1830, p. 993; *id. Naturg. Vögel Deutschl.* p. 909 (1831).

Erismatura leucocephala, *Bp. Sagg. Distr. Met., Agg. e Corr.* p. 143 (1832); *Eyt. Mon. Anat.* p. 170 (1838); *Bp. Icon. Faun. Ital.*,

Ucc. Introd. p. 17 (1841); *id. Cat. Met. Ucc. Eur.* p. 73 (1842); *Rchnb. Syn. Av.*, Natatores, t. 75. ff. 134–136 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 308, n. 1796 (1849); *id. Av. Syst. Nat.* p. viii, t. vii. (1852); *Licht. Nomencl. Av.* p. 103 (1854); *Brehm, J. f. O.* 1855, p. 369 (N.E. Africa); *L. Brehm, Vogelf.* p. 382 (1855); *id. Naumannia*, 1855, p. 298, n. 1; *Bp. Compt. Rend.* xliii. p. 652, n. 157 (1856); *Loche, Cat. M. et O. Algér.* p. 145 (1858); *Schleg. Dierent.* p. 274 (1864); *Salvad. Cat. Ucc. Sard.* p. 108 (1864); *id. J. f. O.* 1865, p. 324 (Sardinia); *Doderl. Avif. Sicil.* p. 269 (1869); *Eyt. Syn. Anat.* p. 129 (1869); *Elwes & Buckl. Ibis*, 1870, p. 340 (Turkey); *G. R. Gr. Hand-list*, iii. p. 90, n. 10718 (1871); *Shell. B. of Egypt*, p. 291, pl. xii. (1872); *Salvad. Faun. d'Ital., Ucc.* p. 270 (1872); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1349 (1873); *Brooke, Ibis*, 1873, p. 343; *Irby, Orn. Str. Gibralt.* p. 205 (1875) (Cadiz, Tangier); *Danf. & Harvie-Brown, Ibis*, 1875, p. 427 (Transylvania); *Wharton, Ibis*, 1876, p. 28 (Corsica); *Dress. Ibis*, 1876, p. 421 (Turkestan); *id. B. Eur.* vi. p. 677, pl. 451 (1878); *Brehm, J. f. O.* 1879, p. 334 (Siebenbürgen); *Schalow, ibid.* p. 335; *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 153 (Omsk, S. Siberia); *Sclat. P. Z. S.* 1880, p. 530; *Hume & Marsh. Game B. of Ind.* iii. p. 289 (Kandahar), p. 436 (Punjab) (1880); *Gigl. Ibis*, 1881, p. 215 (Italy); *Salv. Cat. B. Strickl. Coll.* p. 541 (1882); *Seeb. Ibis*, 1884, p. 429 (Lenkoran); *Tristr. Faun. & Flor. of Palest.* p. 118 (1884); *Whiteh. Ibis*, 1886, p. 46 (Corsica); *Salvad. El. Ucc. Ital.* p. 268 (1886); *St. John, Ibis*, 1889, p. 179 (Kelát); *Tristr. Cat. Coll. B.* p. 47 (1889); *Rchnw. J. f. O.* 1890, p. 84; *Dress. Ibis*, 1891, p. 369 (Erzeroom); *Floerike, J. f. O.* 1891, p. 170 (Schlesia); *Hartert, Kat. Vogelsamml.* p. 234 (1891); *Albarda, J. f. O.* 1892, p. 430 (Holland); *Flower, Ibis*, 1894, p. 359 (egg).

Cerconectes mersa, *Wagl. Isis*, 1832, p. 282.

Undina leucocephala, *Gould. B. Eur.* v. pl. 383 (1837).

Oxyura unifasciata, *Eyt. Mon. Anat.* pl. 24. f. 1 (head of ♂ juv.) (1838).

Erismatura mersa, *Bp. Comp. List*, p. 59, n. 431 (1838); *G. R. Gr. List Gen. B.* p. 75 (1840); *id. op. cit.* 2nd ed. p. 96 (1841); *id. List B. Brit. Mus.* iii. p. 146 (1844); *id. Gen. B.* iii. p. 627, n. 1 (1844); *Rüpp. Syst. Uebers.* p. 138. n. 501 (1845) (Egypt); *Brehm, Vogelf.* p. 382 (1855); *id. Naumannia*, 1855, p. 298, n. 2; *Salv. Ibis*, 1859, pp. 358, 364 (E. Atlas); *Tristr. Ibis*, 1860, pp. 82, 163, 372 (N. Africa); *Powys, ibid.* p. 354 (Ionian Isl.); *Tristr. P. Z. S.* 1864, p. 454 (Galilee); *id. Ibis*, 1868, p. 329 (Palestine); *Shell. Ibis*, 1871, p. 316 (Egypt); *Saund. ibid.* p. 397 (S. Spain); *Severtz. J. f. O.* 1873, p. 344 (Turkestan), 1875, p. 185; *Lilford, Ibis*, 1875, p. 16; *Nathus. J. f. O.* 1879, p. 260 (egg); *Henke, Zool. Gart.* 1880, pp. 142–147 (Kirgis Steppes); *Seeb. Ibis*, 1882, p. 229 (Astrakhan), 1883, p. 35 (Caucasus); *Chapm. Ibis*, 1884, p. 91 (Spain), 1888, p. 447.

Undina mersa, *K. & B. Wirbelth. Eur.* pp. lxxxvi, 229 (1840); *Radde, Ornis Caucas.* p. 459 (1884) (Caspian).

Bythouessa leucocephala, *Gloger, Gem. Hand- u. Hilfsb.* i. p. 472 (1842).

Fuligula mersa, *Degl. Orn. Eur.* ii. p. 476 (1849); *Wright, Ibis*, 1864, p. 291 (Malta); *Severtz. Turkest. Jevotn.* p. 70 (1870).

Erismatura unifasciata, *Bp. Compt. Rend.* xliii. p. 652 (?) (1856); *Eyt. Syn. Anat.* p. 129 (Persia) (1869).

Biziura leucocephala, *Schleg. Mus. P.-B.*, Anseres, p. 11 (1866); *Gieb.*

Thes. Orn. ii. p. 467 (1872); *Crommel. Arch. Néerl.* x. p. 175 (1875) (Netherlands).

Erimistura (*errore?*) leucocephala, *Degl. & Gerbe, Orn. Eur.* ii. p. 566 (1867).

Adult male. Crown black; forehead, sides of the head, including the space above the eye, chin and nape pure white; below this white the neck all round is black; lower neck and breast chestnut-red, with narrow blackish bars; back, scapulars, sides, and flanks reddish chestnut, more or less buffish, and finely and irregularly vermiculated with blackish; upper tail-coverts deep chestnut; underparts, below the breast, reddish buffy white; wings brown-grey, the wing-coverts and secondaries finely vermiculated with buffy white; under wing-coverts grey, the central ones whitish; axillaries white; tail blackish: "bill blue; iris dark brown; feet ashy brown, with the webs black" (*Salvadori*). Total length about 18·5 inches, wing 6·5, tail 4·5, culmen 1·9, tarsus 1·3.

A specimen in the Museum of Turin from Sardinia, affected by incipient albinism, is altogether much paler, has no black round the neck, except on the nape, and has the white much more extended, covering entirely the throat.

Female. Differs from the male in lacking the clear white on the head and in being much more rufous, especially on the underparts; crown, nape, and cheeks brown-chestnut, with blackish bars; a white streak below the eye, from the base of the bill nearly to the nape; chin, throat, and sides of the neck just near the head whitish, dotted or streaked with blackish on the sides of the neck; upper tail-coverts scarcely deeper chestnut than the remainder of the upper parts: bill dull plumbeous; iris dark brown; legs plumbeous black.

Young male. Very similar in plumage to the old female, only somewhat more ruddy on the back.

Young in down. Brown-grey; upper part of the head and cheeks dark brown; a streak below the eye, from the base of the bill to the nape, throat, and sides of the upper part of the neck dull greyish white undulated with dusky; a whitish spot on each side of the rump just below the wings; edge of the wing and under wing-coverts whitish (*Sardinia, Mus. Turin*).

Hab. From the basin of the Mediterranean to Turkestan; according to Finsch, also Southern Siberia; North-western India in winter; accidental in Germany and Holland.

a–f. ♂ ♀ ad. et pull. st.	No locality.	Purchased.
g–l. ♂ ♀ ad. sk.	El Baheira, Tunis, March (*O. Salvin*).	Salvin-Godman Coll.
m. ♂ ad. sk.	El Baheira, Tunis, March (*O. S.*).	H. J. Elwes, Esq. [P.].
n. ♂ ad. sk.	Alexandria, Egypt, March (*G. E. S.*).	Shelley Coll.
o. ♀ ad. sk.	Damietta, Egypt, Dec. (*Filipponi*).	Shelley Col.

p. ♀ ad. sk.	Bosphorus, winter (*T. Robson*).	H. J. Elwes, Esq. [P.].
q. ♂ ad. st.	Odessa.	Dr. Dowler [P.].
r, s. ♂ ♀ ad. sk.	Lenkoran, Jan.	Seebohm Coll.
t. ♂ juv. sk.	Persia, Oct.	Eyton Coll. (Type of *Oxyura unifasciata*, Eyton.)
u. ♂ ad. sk.	Kirghiz Steppes.	Tweeddale Coll.
v. ♂ juv. sk.	Khelat-i-Ghilzai, Kandahar, Oct. (*Sir O. St. John*).	Hume Coll.
w. ♂ ad. sk.	Peshawar, March.	Brigadier-Gen. Kinloch [P.].
x. ♀ ad. sk.	Ludhiana, Oct. (*F. Field*).	Hume Coll.
y. ♂ juv. sk.	Najafgarh Jhil, Delhi district, Jan. (*W. N. Chill*).	Hume Coll.
z. ♂ juv. sk.	Juhtikea, Delhi district, Feb. (*W. N. Chill*).	Hume Coll.
a'. ♂ juv. sk.	Delhi district, Oct. (*W. N. Chill*).	Hume Coll.
b', c'. Sterna with shoulder-girdle.	Algeria.	

2. Erismatura jamaicensis.

? Teal, *Bancroft, Hist. of Guiana*, p. 170 (1769).

Jamaica Shoveler, *Lath. Syn.* iii. 2, p. 513, n. 58 (1785) (descr. optima).

Anas jamaicensis, *Gm. S. N.* i. 2, p. 519, n. 83 (1788) (*ex Latham*); *Lath. Ind. Orn.* ii. p. 857, n. 63 (1790); *Bonn. Enc. Méth.* i. p. 127 (1790); *Vieill. N. D.* v. p. 164 (1716); *Dum. Dict. Sc. Nat.* vi. p. 385 (1817); *Ord, ed. Wils.* viii. p. 138, pl. lxxi. f. 1 (♂) (1824).

Rhynchaspis jamaicensis, *Steph. Gen. Zool.* xii. 2, p. 119 (1824).

Anas rubida, *Wils. Am. Orn.* viii. pp. 128, 130, pl. 71. ff. 5, 6 (1814); *Sabine, Frankl. Journ.* p. 700 (1823); *Vieill. Enc. Méth.* i. p. 359 (1823); *Bp. Specch. Comp.* p. 72, n. 251 (1827).

? Anas cyanorostris, *Vieill. N. D.* v. p. 165 (1816) (Mexico, *ex Hernandez's* Yacatexotly=Blue-bill).

? Anas recurvirostra, *Vieill. op. cit.* p. 167 (1816) (= Anas jamaica, *Lath.*).

Rhynchaspis rubida, *Steph. Gen. Zool.* xii. 2, p. 120 (1824).

Anas (Fuligula) rubida, *Bp. Obs. Nomencl. Wils.* n. 268 (1825).

Fuligula (Oxyura) rubida, *Bp. Ann. Lyc. N. Y.* ii. p. 390 (1826); *id. Syn.* p. 390 (1828).

Fuligula rubida, *Sw. & Rich. Faun. Bor.-Am.* ii. p. 455 (1831); *Bp. Isis*, 1832, p. 1188; *Aud. Orn. Biogr.* iv. p. 326, pl. 343 (1838); *id. Syn.* p. 288 (1839); *id. B. Am.* vi. p. 324, pl. 399 (1843); *Giraud, B. Long Isl.* p. 326 (1844); *De Kay, N. Y. Zool.* ii. p. 327 (1844); *Lemb. Av. Cub.* p. 118 (1850); *Wied, J. f. O.* 1859, p. 178.

Cerconectes rubida, *Wagl. Isis*, 1832, p. 282.

Fuligula (Gymnura) rubida, *Nutt. Man.* ii. p. 426 (1834).

Erismatura rubida, *Bp. Comp. List*, p. 59, n. 397 (1838); *Eyt. Mon. Anat.* p. 171 (1838); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* p. 146 (1844); *id. Gen. B.* iii. p. 627, n. 2 (1844); *Rchnb. Syn. Av.*, Natatores, t. 75. ff. 887–88 (1845); *Blyth, Cat. B. Mus. A. S. B.* p. 308, n. 1797 (1849); *Licht.*

Nomencl. Av. p. 103 (1854) (Mexico); *Bp. Compt. Rend.* xliii. p. 652, n. 160 (1856); *Cab. & Gundl. J. f. O.* 1857, p. 230 (Cuba); *Baird, B. N. Am.* p. 811 (1858); *id. Cat. N. Am. B.* n. 609 (1859); *Bryant, Pr. Bost. Soc. Nat. Hist.* vii. p. 122 (1859) (Bahamas); *Sclat. & Salv. Ibis*, 1859, pp. 5, 232 (eggs, Guatemala); *Sclat. P. Z. S.* 1859, p. 393 (Oaxaca); *Heerm. P. R. R. Rep.* x. pt. vi. p. 70 (1859) (California); ?*Taylor, Ibis*, 1860, p. 315 (Honduras); *Gundl. J. f. O.* 1861, p. 346 (Cuba); *Anonymous, Ibis*, 1862, p. 289 (Martinica); *Ross, Canad. Nat.* vii. p. 153 (Slave Lake) (1862); *id. Nat. Hist. Rev.* (2) i. p. 288 (1862); *Hayd. Rep.* 1862, p. 176; *Verr. Pr. Ess. Inst.* iii. p. 159 (1862); *Blakist. Ibis*, 1863, p. 150 (Hudson's Bay); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 390 (1866); *Lawr. Ann. Lyc. N. Y.* viii. (1866) p. 298 (Long Isl.) (1867); *Coues, Pr. Ess. Inst.* v. p. 201 (1868); *Eyt. Syn. Anat.* p. 130 (1869); *Stev. U. S. Geol. Surv. Terr.* p. 466 (1870); *G. R. Gr. Hand-list*, iii. p. 90, n. 10721 (1871); *Coues, Key*, p. 295 (1872); *id. Check-list*, n. 519 (1873); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *Lawr. Mem. Bost. Soc. N. H.* ii. p. 315 (1874) (Mexico); *Deane, Amer. Nat.* viii. p. 433 (1874) (Cape Cod, Mass.); *Coues, B. N.-West*, p. 583 (1874); *Gundl. J. f. O.* 1874, p. 314 (Porto Rico), 1875, p. 384 (Cuba); *Sclat. & Salv. P. Z. S.* 1876, pp. 403, 411; *Gundl. Anal. Soc. Esp. Hist. Nat.* vii. p. 407 (1878) (Porto Rico); *id. J. f. O.* 1878, pp. 162, 191; *Coues, Am. Nat.* xii. p. 123, fig. of tail-feathers (1878); *Sclat. P. Z. S.* 1880, p. 530; *Cory, B. Bahama Isl.* p. 189 (1880); *A. & E. Newt. Handb. Jam.* p. 113 (1881); *Ridgw. Nom. N. Am. B.* n. 634 (1881); *Forbes, P. Z. S.* 1882, p. 456 (no bulla ossea); *Coues, Check-list*, 2nd ed. p. 117, n. 741 (1882); *id. Key N. Am. B.* 2nd ed. p. 715, n. 741 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 104 (1884); *Cory, List B. W. Ind.* p. 31 (1885); *Nehrl. J. f. O.* 1885, p. 148; *Wells, List B. Grenada*, p. 10 (1886); *A. O. U. Check-list N. Am. B.* p. 124, n. 167 (1886); *Zeledon, An. Mus. Nac. Rep. Costa Rica*, 1887, p. 132 (*Cat. Av. Costa Rica*, p. 132, n. 688, 1887); *Ridgw. Man. N. Am. B.* p. 113, n. 167 (1887); *Cory, Auk*, 1888, p. 68; *id. B. W. Ind.* p. 269 (1889); *Feild. Ibis*, 1889, p. 500 (Barbados); *Tristr. Cat. Coll. B.* p. 47 (1889); *Scott, Auk*, 1891, p. 364 (Jamaica); *Hartert, Kat. VogelsammL.* p. 234 (1891); *Hatch, B. of Minnes.* p. 71 (1892); *Beristain & Laurencio, Mem. y Rev. Soc. Cient.* vii. p. 209, n. 62 (1893).

Biziura rubida, *Schleg. Mus. P.-B.*, Anseres, p. 11 (1866); *Gieb. Thes. Orn.* i. p. 468 (1872).

Erismatura ferruginea, *Frantz.* (*nec G. R. Gr.*) *J. f. O.* 1869, p. 378 (Costa Rica).

Erismatura dominica, *Aiken* (*nec Linn.*), *Pr. Bost. Soc.* xv. p. 210 (1872) (Colorado ?).

Adult male. Upper part of the head, down to under the eyes, and upper half of the nape deep black, cheeks and chin pure white; rest of the neck, back, scapulars, upper tail-coverts, sides, and flanks rich chestnut-rufous, deeper on the upper breast; lower parts silvery white on the surface or edges of the feathers, while the concealed portions of the same are brownish grey, showing through more or less; under tail-coverts entirely white to the roots of the feathers; wing-coverts, lower back, and rump dusky greyish brown, minutely mottled with paler; remiges dull brownish; under wing-coverts and axillaries dull grey, the latter edged with white; rectrices

brownish black: "bill and edges of the eyelids greyish blue; iris hazel; feet dull greyish blue, webs inclining to dusky" (*Audubon*). Total length 16 inches, wing 6, tail 3·75, culmen 1·75, tarsus 1·12.

Female. Upper half of the head, down to below the eyes, and upper parts generally dusky greyish brown, minutely freckled and sometimes indistinctly barred with greyish buff, more reddish, almost chestnut, on the head; cheeks like the top of the head; a whitish stripe, freckled with brown, from the base of the bill almost to the nape; chin and throat whitish; neck pale brownish grey, with narrow whitish bands; lower parts whitish; sides and flanks with broadish brown bands and narrower ones of a whitish-buff colour; wings dusky brown, finely mottled with paler; remiges uniform; tail brown; bill dusky. Total length about 16 inches, wing 5·6, tail 3·75, culmen 1·5, tarsus 1·1.

Young male. Similar to the female, but cheeks whitish buff, with no dark streak across, and sometimes only anteriorly tinged with dusky brown; under tail-coverts distinctly white.

Young in down. Above dark smoky brown, darker on head; a whitish spot on each side of the back; below eye, from bill to occiput, a stripe of brownish white, and beneath this a narrower one of dusky brown, confluent with the brown of the nape; beneath greyish white, shading into sooty brown on chest.

Hab. Temperate North America, from Hudson's Bay to Guatemala, Costa Rica, and West Indies; according to Ridgway, also New Granada!

a. ♂ ad. st.	N. America.	Hudson's Bay Co [P.].
b. Pull. st.	N. America.	Purchased.
c. ♀ ad. sk.	N. America.	Lord Odo Russell [P.].
d, *e*. ♂ ♀ ad. et juv. sk.	Arctic Exp.	Sir G. Back [P.].
f, *g*. ♂ ♀ ad. sk.	49th Parallel.	N. America Boundary Comm. [P.].
h. ♂ ad. sk.	Washington, D.C., April.	Salvin-Godman Coll.
i. ♂ ad. sk.	North Dakota, May.	E. S. Cameron, Esq. [P.].
k. ♂ juv. sk.	Boston, Massachusetts, Oct.	Salvin-Godman Coll.
l. ♂ ad. sk.	Grand Tower, Illinois, April.	Howard Saunders, Esq. [P.].
m, *n*, *o*. ♂ ♀ ad. sk.	Riverdale, Illinois, May (*E. W. Nelson*).	Salvin-Godman Coll.
p. ♂ juv. sk.	Norfolk, Virginia, Jan. (*W. Brewster*).	Salvin-Godman Coll.
q. Pull. sk.	Arkansas River, Aug. (*C. E. Aiken*).	Salvin-Godman Coll.
r–*u*. ♀ ad. et ♂ juv. sk.	Corpus Christi, Texas, Dec., Jan. (*F. B. Armstrong*).	Salvin-Godman Coll.
v–*a'*. ♂ ♀ ad. sk.	Brownsville, Texas, March, April, Nov. (*F. B. Armstrong*).	Salvin-Godman Coll.

b'. ♀ juv. sk.	San Francisco, California, Oct.	H. J. Elwes, Esq. [P.].
c'. ♂ ad. sk.	Mexico.	H. J. Elwes, Esq. [P.].
d'. ♂ ad. sk.	Valley of Mexico (*Le Strange*).	Salvin-Godman Coll.
e'. Juv. sk.	Aguas Calientes, Mexico, Aug. (*W. B. Richardson*).	Salvin-Godman Coll.
f',*g'*. ♂ ♀ ad. sk.	Dueñas, Guatemala, Feb. (*O. Salvin*).	Salvin-Godman Coll.
h'. ♂ ad. sk.	Mount Eagle, Jamaica, May (*W. Osburn*).	Salvin-Godman Coll.
i', *k'*. ♀ ad. et ♂ juv. st.	[South America.]	Old Coll.
l'. Skeleton.	No locality.	Salvin-Godman Coll.

3. Erismatura maccoa.

Oxyura maccoa, *Smith, Cat. S. Afr. Mus.* p. 37, n. 329 (1837) (descr. nulla); *id. Ill. Zool. S. Afr., Aves*, pls. 108, 109 (1847).

Erismatura maccoa, *Eyt. Mon. Anat.* p. 169 (1838) (♀) (Indian Isles!); *G. R. Gr. List B. Brit. Mus.* iii. p. 146 (1844) (South America!); *id. Gen. B.* iii. p. 627, n. 4 (1844); *Licht. Nomencl. Av.* p. 103 (1854) (S. Africa); *Layard, B. S. Afr.* p. 356 (1867); *Eyt. Syn. Av.* p. 128 (juv.) (1869); *Ayres, Ibis*, 1869, p. 302 (Transvaal); *Gurn. in Anderss. B. Damara Land*, p. 344 (1872) (Orange River); *Sharpe, Layard's B. S. Afr.* p. 762 (1884); *Salvad. Ann. Mus. Civ. Gen.* (2) i. p. 249 (1884) (Shoa); *Gigl. ibid.* vi. p. 60 (1886) (Shoa); *Salvad. ibid.* p. 325 (1886) (Shoa); *Rchnw. Vög. Deutsch-Ost-Afr.* p. 26 (Kibaya, Massai).

Oxyura (Erismatura) maccoa, *Eyt. Mon. Anat.*, list of plates, pl. 24. f. 1 (1838).

Erismatura leucocephala africana, *Rchnb. Syn. Av.*, Natatores, t. 78. f. 899 (1845).

Erismatura africana, *Rchnb. Syn. Av.*, Natatores, text [p. 3] (1845).

Erismatura maccao, *G. R. Gr. Gen. B.*, Append. p. 28 (1849).

Erismatura moccoa, *Bp. Compt. Rend.* xliii. p. 652, n. 158 (1856); *G. R. Gr. Hand-list*, iii. p. 90, n. 10719 (1871).

Biziura maccao, *Schleg. Mus. P.-B.*, Anseres, p. 10 (1866).

Biziura maccoa, *Gieb. Thes. Orn.* i. p. 468 (1872).

Erismatura mocoa, *Sclat. P. Z. S.* 1880, pp. 530, 534; *Tristr. Cat. Coll. B.* p. 47 (1889) (Transvaal).

Adult male. Head and upper part of the neck black, descending lower down on the nape; lower neck, upper breast, sides, flanks, and upper part bright red-chestnut; this colour from the breast downwards shades gradually on the lower parts, which are silvery grey, into the dusky bases of the feathers; wings brown, finely mottled with pale rufous on the wing-coverts and secondaries; in some specimens the median wing-coverts are edged with chestnut; primaries uniform brown; under wing-coverts grey edged with white; axillaries white, more or less stained with grey; tail blackish: "iris dark hazel; beak blue-black; feet dark [lead] blue" (*Antinori*). Total length about 18 inches, wing 7, tail 3·5, culmen 1·7, tarsus 1·38.

Some specimens, perhaps not very old, have the median wing-coverts edged with chestnut and the under tail-coverts tinged with reddish (*Mus. Turin*).

Female. Similar to those of *E. rubida* and *E. vittata*, but is easily distinguished by the much broader bill (1 inch in the broadest part), and in having the upper parts with broader freckled bands of a brighter buff colour; from the female of *E. vittata* it differs also in lacking the distinct white under tail-coverts.

Male in moulting dress. Intermediate between the adult female and the adult male, having the head nearly black with many whitish feathers on the sides; throat whitish, with many black feathers; feathers of the back dusky, finely freckled with chestnut, the edges chestnut; a chestnut tinge on the edges of the feathers of the throat and of the flanks; rest of the underparts, wings, and tail as in the female; only the wings show a slight chestnut tinge on the edges of the median wing-coverts (*Mus. Turin*).

Hab. South Africa, North to Orange River on the West, to Shoa on the East.

a, *b*, *c*. ♂ ♀ ad. et ♂ imm. sk.	South Africa.	Sir A. Smith [P.]. (Types of the species.)

4. Erismatura ferruginea.

Erismatura ferruginea, *Eyt. Mon. Anat.* p. 170 (Chili ?) (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 146 (1844); *G. R. Gr. & Mitch. Gen. B.* iii. p. 627, n. 3, pl. 169 (1844); *Rchnb. Syn. Av.*, Natatores, t. 78. f. 898 (1845) (*ex Gr. & Mitch.*); *Sclat. & Salv. P. Z. S.* 1868, p. 177 (S. Peru), p. 570 (W. Peru); *Eyt. Syn. Anat.* p. 129 (1869); *Gr. R. Gr. Hand-list*, iii. p. 90, n. 10722 (part.) (1871); *Tacz. P. Z. S.* 1874, p. 554 (eggs, Peru); *Sclat. P. Z. S.* 1880, p. 530 (part.); ? *Salv. P. Z. S.* 1883, p. 428; *Tacz. Orn. Pér.* iii. p. 484 (1886); *Ridgw. Man. N. Am. B.* p. 113 (part.) (1887).

Similar to *E. vittata*, but with a much broader and larger bill.

The *adult male* has the chestnut colour of the breast much deeper, a white spot on the chin, much darker brown underparts, and the under tail-coverts chestnut: "bill bluish lead, lower mandible yellow; feet brown, with the webs darker; irides brown" (*Taczanowsky*). Total length about 17 inches, wing 6, tail 3, culmen 1·7, broadest part of the bill 0·85, tarsus 1·39.

The *adult female* is easily distinguished by having the cheeks brown, with no whitish band under the eyes; there is only a whitish indistinct spot on the cheeks near the base of the bill.

Hab. Bolivia and Peru.

a, *b*. ♂ ♀ ad. st.	Chili ?	C. Crawley, Esq. [P.]. (Types of the species.)
c, *d*, *e*. ♂ ♀ ad. et ♂ juv. sk.	Lake Titicaca, Peru (*Messrs. Veitch*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Vicinity of Lima, Peru (*Nation*).	Salvin-Godman Coll.
g. ♂ ad. sk.	Laguna de Tambo, Nov. (*H. Whitely*).	H. J. Elwes, Esq. [P.].

5. Erismatura æquatorialis.

Very similar to *E. ferruginea*, but somewhat smaller, and the male has the chestnut colour of the upper parts and breast brighter and the under tail-coverts white, instead of chestnut.

The *female*, similar to that of *E. ferruginea*, has no whitish band under the eyes.

Hab. Ecuador.

a. ♂ ad. sk. Antisana, Ecuador (*C. Buckley*). Salvin-Godman Coll. {
b. ♀ ad. sk. Sical, Ecuador (*Villagomez*). Salvin-Godman Coll. {
(Types of the species.)

6. Erismatura vittata.

Erismatura ferruginea, *Bridges* (*nec Eyton*), *P. Z. S.* 1843, p. 119 (Lake of Quintero, Chili); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *Des Murs in Gay, Hist. Nat. Chile*, i. p. 458 (Centr. Chili) (1848); *G. R. Gr. Gen. B.*, App. p. 28 (1849); *Hartl. Naumannia*, 1853, p. 222, n. 172; *Bibra, Denkschr. Ak. Wien*, v. p. 204 (1853); *id. J. f. O.* 1855, p. 57; *Bp. Compt. Rend.* xliii. p. 652, n. 161 (1856); *Cass. U.S. Astron. Exped.* ii. p. 204 (1856); *Blas. Ibis*, 1861, p. 294 (Belgium!); *Pelz. Reise Novara, Vög.* p. 139 (1865) (Chili); *Sclat. P. Z. S.* 1867, pp. 335, 340 (Chili); *Phil. & Landb. Cat. Av. Chil.* p. 43 (1868); *G. R. Gr. Hand-list*, iii. p. 90, n. 10722 (part.) (1871); *Burm. P. Z. S.* 1872, p. 368 (Argentine); *Sclat. P. Z. S.* 1872, p. 549 (Rio Negro, Patagonia); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *Durnf. Ibis*, 1876, p. 163 (Buenos Ayres); *Sclat. & Salv. P. Z. S.* 1876, p. 404; *Durnf. Ibis*, 1871, p. 42 (Chuput), p. 192 (Buenos Ayres), 1878, p. 401 (Central Patagonia); *Sclat. P. Z. S.* 1880, p. 530 (part.); *B., B., & R. Water-B. N. Am.* ii. p. 104 (1884); *Berl. J. f. O.* 1887, p. 133 (Paraguay?); *Ridgw. Man. N. Am. B.* p. 113 (part.) (1887); *Philippi, Ornis*, iv. p. 160 (1888) (Antofagasta); *Burm. An. Mus. Nac. Buen. Air.* iii. p. 248 (Patag. sept.) (1888); *Sclat. Argent. Orn.* ii. p. 138 (1889); *Trist. Cat. Coll. B.* p. 47 (1889); *G. Kerr, Ibis*, 1890, p. 359 (Pilcomayo); *Frenzel, J. f. O.* 1891, p. 125 (Cordoba); *Berk. James, New List Chil. B.* p. 10, n. 162 (1892); *Aplin, Ibis*, 1894, p. 201 (Uruguay).

Anas cyanorhyncha, *Licht. MS., teste Hartl. Verz. Ges. Mus.* p. 121 (1844).

Anas ferruginea, *Burm. Syst. Uebers.* iii. p. 440 (1856).

Erismatura vittata, *Phil. Wiegm. Arch.* 1860, i. p. 26 (Chili, juv.); *Sclat. P. Z. S.* 1867, p. 335; *Phil. P. Z. S.* 1868, p. 531.

Biziura ferruginea, *Schleg. Mus. P.-B.*, Anseres, p. 10 (1866); *Gieb. Thes. Orn.* i. p. 467 (1872).

Erismatura cyanorhyncha, *Licht. teste Schlegel, l. c.*

Adult male. Head and neck, except lower half of latter in front, uniform black; lower part of the neck in front, breast, sides, flanks, and upper parts bright red-chestnut; the chestnut of the breast gradually blending into the greyish brown of the abdomen, where the feathers have brown base, and silvery-grey tips; under tail-coverts distinctly white, but sometimes with a slight rufous tinge; wings brown, the median wing-coverts stained with chestnut near the tips; under wing-coverts grey, tipped with white; axillaries grey, edged with white; tail brown-black: "bill blue-grey; legs

black; iris dark red" (*Burmeister*). Total length about 17·5 inches, wing 5·75, tail 3·5, culmen 1·65, broadest part of the bill 0·8, tarsus 1·2.

Female. Above brown, irregularly and indistinctly barred with buff; upper part of the head almost uniform brown; cheeks dark brown with paler dottings; a buffish-white stripe under the eyes from the base of the bill to the occiput; throat whitish; underparts silvery whitish at the tip of the feathers, but the bases of the feathers brown, showing through more or less; flanks brown, with broadish white-buff bands; under tail-coverts conspicuously white; wings dusky brown, freckled with buff on the median wing-coverts; under wing-coverts and axillaries greyish brown edged with white; tail brown.

Young. Similar to the female.

Male in moulting dress. Similar to the female, but the upper part of the head barred with chestnut-brown; many chestnut feathers among the brown ones of the upper parts, and some also on the flanks (*Mus. Turin*).

Hab. Southern America, from Chili to Uruguay, Argentine, and Patagonia.

a. ♂ ad. sk.	No locality.	Eyton Coll.
b. ♂ ad. sk.	? Chili (*Capt. Markham*).	Salvin-Godman Coll.
c. ♂ juv. sk.	Tarapacá, Chili.	H. Berkeley James, Esq. [P.].
d, e. ♂ ♀ ad. sk.	Prov. Santiago, Chili (*Leybold*).	Salvin-Godman Coll.
f–l. ♂ ♀ ad. et ♂ juv. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
m–r. ♂ ♀ ad., ♂ imm., et juv. sk.	Rio Pilmaiquen, Chili, Feb., March.	H. Berkeley James, Esq. [P.].
s. ♂ imm. sk.	The Market, Monte Video, April.	H. Durnford, Esq. [P.].
t, u. ♀ ad. sk.	S. America.	Eyton Coll.

7. Erismatura australis.

Oxyura australis, *Gould*, *P. Z. S.* 1836, p. 85 (Australia); *id. Syn. B. Austr.* pl. — (head ♂ ♀) (1837).

Erismatura australis, *Eyt. Mon. Anat.* p. 172 (1838); *G. R. Gr. List B. Brit. Mus.* iii. p. 146 (1844); *id. Gen. B.* iii. p. 627, n. 5 (1844); *Gould, B. Austr.* vii. pl. 17 (pt. xvi., 1844); *Rchnb. Syn. Av.*, Natatores, t. 78. ff. 902–903 (1845) (*ex Gould*); *Bp. Compt. Rend.* xliii. p. 652, n. 159 (1856); *Gould, Handb. B. Austr.* ii. p. 379 (1865); *Eyt. Syn. Anat.* p. 131 (1869); *G. R. Gr. Handlist*, iii. p. 90, n. 10720 (1871); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 196, 220 (1876) (Melbourne), ii. p. 200, n. 663 (1878) (Victoria, S. and W. Australia); *Sclat. P. Z. S.* 1880, p. 530; *Ramsay, Tab. List*, p. 22, n. 675 (1888); *Tristr. Cat. Coll. B.* p. 47 (1889); *North, Descr. Cat. Nests and Eggs B. Austr.* p. 346 (1889); *K. H. Bennett, Ibis*, 1891, pp. 143–145; *North, Rec. Austr. Mus.* ii. p. 37 (1892) (Tasmania).

Biziura australis, *Schleg. Mus. P.-B.*, Anseres, p. 11 (1866); *Gieb. Thes. Orn.* i. p. 467 (syn. emend.) (1872).

Oxyura (Erismatura) australis, *Eyt. Suppl. to Osteol. Av.* pl. 15 (♀ skeleton) (1869).

Adult male. Head, throat, and neck black; breast, back, and flanks rich chestnut; rump brownish black, freckled or barred with irregular pale reddish lines; upper tail-coverts tinged with chestnut; belly and under tail-coverts brown, with the tips of the feathers silvery rufous-white; wings and tail dark brown; upper wing-coverts and secondaries sprinkled with paler points; under wing-coverts and axillaries grey, edged with white: "irides very dark brown: bill light blue; front and inner side of the tarsi and toes French-grey, outside of the tarsi and webs blackish grey" (*Gould*). Total length about 16 inches, wing 6·2, tail 2·6, culmen 1·6, tarsus 1·25.

Female. Brown; upper parts darker, marked with zigzag lines and freckles of a pale buff-rufous colour; lighter and more greyish brown on the under surface, where the feathers have silvery yellowish tips: "bill dark olive-green, the under mandible lighter than the upper; irides, legs, and feet as in the male" (*Gould*). Size about the same as that of the male.

Hab. Southern and Western Australia and Tasmania.

a, b. ♂ ♀ ad. st.	W. Australia.	Purchased.
c, d. ♂ ♀ ad. st.	New South Wales.	Australian Museum [P.].
e. ♂ imm. sk.	Australia.	Salvin-Godman Coll.

58. BIZIURA *.

	Type.
Biziura, *Leach*, *MS.*; *Steph. Gen. Zool.* xii. 2, p. 221 (1824)	B. lobata.
Hydrobates, *Temm. Pl. Col.* 406 (livr. 68, 1826) (*nec Boie*, 1822)	B. lobata.

Range. Confined to Australia.

1. Biziura lobata.

Anas lobata, *Shaw*, *Nat. Misc.* viii. pl. 255 (1796); *Dum. Dict. Sc. Nat.* vi. p. 387 (1817).

Lobated Duck, *Lath. Gen. Syn. Suppl.* ii. p. 349 (1801).

Anas carunculata, *Vieill.* (*nec Illig.*) *N. D.* v. p. 109 (1816); *id. Enc. Méth.* i. p. 356, pl. 236. f. 2 (1823).

Biziura novæ hollandiæ, *Steph. Gen. Zool.* xii. 2, p. 222 (1824).

Hydrobates lobatus, *Temm. Pl. Col.* 406 (livr. 68, 1826); *Less. Man. d'Orn.* ii. p. 414 (1828); *id. Tr. d'Orn.* p. 630 (1831); *Breton, P. Z. S.* 1834, p. 19 (habits); *Less. Compl. de Buff., Ois.* ix. p. 529 (1837); *id. op. cit.* 2nd ed. p. 718 (1838).

Biziura lobata, *Eyt. Mon. Anat.* p. 168 (1838); *G. R. Gr. List Gen. B.* p. 75 (1840); *id. op. cit.* 2nd ed. p. 96 (1841); *id. List B. Brit. Mus.* iii. p. 145 (1844); *id. Gen. B.* iii. p. 627 (1844); *Gould, B. Austr.* vii. pl. 18 (pt. xvi., 1844); *Rchnb. Syn. Av.*, Natatores, t. 81. ff. 145-146 et 904 (1845); *Blyth, Cat. B. Mus. A. S. B.*

* Eyton (Ann. & Mag. N. H. vii. p. 177, 1841) has the following remarks about *B. lobata*:—"There is a strong resemblance to the totipalmate division of Water-birds; *trachea* like that of a Cormorant, and also furnished with the same muscles of voice. Tongue and digestive organs resemble those of *Clangula*, *Melanetta*, and *Nyroca*. Skeleton resembles that of a Gannet, except the head. Posterior margin of sternum like that of a *Sula*."

p. 308, n. 1795 (1849); *Rchnb. Av. Syst. Nat.* p. vii, tab. vii. (1852); *Licht. Nomencl. Av.* p. 103 (1854); *Bp. Compt. Rend.* xliii. p. 652, n. 155 (1856); *Pelz. Reise Novara, Vög.* p. 139 (1865); *Gould, Handb. B. Austr.* ii. p. 381 (1865); *Schleg. Mus. P.-B.*, Anseres, p. 7 (1866); *Rams. Ibis*, 1867, p. 413, pl. viii. f. 1 (egg); *Müll. P. Z. S.* 1869, p. 280 (Melbourne); *Eyt. Syn. Anat.* p. 127 (1869); *id. Suppl. to Osteol. Av.* pl. — (♂ ♀) (1869); *G. R. Gr. Hand-list*, iii. p. 90, n. 10716 (1871); *Gieb. Thes. Orn.* i. p. 467 (1872); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Diggl. B. Austr.* ii. pl. 117 (1877); *Rams. Pr. Linn. Soc. N. S. W.* i. pp. 196, 216, 219 (1877), ii. p. 200, n. 664 (1878); *Sclat. P. Z. S.* 1880, pp. 529, 535, 1882, p. 311 (Zool. Gard.); *Forbes, P. Z. S.* 1882, pp. 455–458 (anatomy); *Salv. Cat. B. Strickl. Coll.* p. 540 (1882); *Saund. Ibis*, 1883, p. 351; *Sclat. List Vert. An.* 8th ed. p. 442 (1883); *Legge, Pr. R. Soc. Tasm.* 1886, p. 245 (Tasmania) (1887); *Rams. Tab. List*, p. 22, n. 675 (1888); *Tristr. Cat. Coll. B.* p. 46 (1889); *North, Descr. Cat. Nests and Eggs B. Austr.* p. 346 (1889); *K. H. Bennett, Ibis*, 1891, p. 145; *Hartert, Kat. Vogelsamml.* p. 233 (1891); *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 309 (1891).

Bizeura lobata, *Eyt. Ann. & Mag. N. H.* vii. p. 177 (1841).

Erismatura lobata, *Schleg. De Dierent.* p. 275 (1864).

Erismatura (Biziura) lobata, *Rchnw. Orn. Centralbl.* 1882, p. 4; *id. Vög. zool. Gärt.* p. 44 (1882).

Adult male. Upper part of the head and nape brownish black, sprinkled with fine points of a lighter colour, scarcely visible; remainder of the upper surface, chest, and flanks blackish brown, crossed by numerous narrow freckled bars of buffy white, in some specimens almost obsolete; sides of the head and neck lighter, the pale and blackish bars broader; underparts buffy white at the tip of the feathers; under tail-coverts dark brown, crossed with buffy-white bands at the tip of the feathers; quills and tail-feathers blackish brown; irides dark brown: "bill and large lobe beneath the chin greenish black; legs and feet dark leaden grey; inside of the tarsi greenish grey" (*Gould*). Total length about 26 inches, wing 9·25, tail 6, culmen 1·7, tarsus 1·55.

Female. Similar to the male in colour, but much smaller, and also the lobe beneath the chin much smaller. Total length about 23 inches, wing 7·5, culmen 1·4.

Mr. Gould says that the female is sometimes destitute of the lobe beneath the chin; but I think that he was mistaken, as every specimen in the collection, even the young in down, is furnished with the lobe.

Young in down. Upper parts, head, neck, upper part of the breast, sides and flanks uniform dark brown, scarcely lighter round the face, at the base of the bill; lower breast, abdomen, and under tail-coverts whitish.

Hab. Australia, except the northern part, and Tasmania.

a. ♂ ad. sk.	Australia.	Gould Coll.
b. Ad. sk.	Australia.	Purchased.
c, d. Ad. sk.	Australia.	Salvin-Godman Coll.
e. ♀ ad. sk.	Australia.	Imperial Institute [P.].

f–i. ♂ ♀ ad. et pull. sk.	S. Australia.	C. D. E. Fortnum, Esq. [P.].
k. ♀ ad. sk.	Lawrence River (*Irring*).	Salvin-Godman Coll.
l, m. ♂ ♀ ad. sk.	New South Wales.	Australian Museum [P.].
n. ♀ ad. sk.	New South Wales.	Hume Coll.
o, p. ♂ ♀ ad. sk.	Tasmania.	Victorian Museum [P.].
q. ♀ ad. sk.	Tasmania.	Gould Coll.

Subfamily X. MERGANETTINÆ.

Key to the Genera.

a. Upper mandible with prominent lamellæ on the edges; edges of the upper mandible bent inwards towards the tip; tail-feathers moderately broad.
  a'. Edges of the upper mandible at the tip not soft; wings with a distinct speculum. [p. 454.] 59. SALVADORINA,
  b'. Edges of the upper mandible at the tip soft; no wing-speculum ..... [p. 455.] 60. HYMENOLÆMUS,
b. Upper mandible with no prominent lamellæ; edges of the upper mandible not bent inwards towards the tip; tail-feathers very stiff and with very narrow webs ..... [p. 457.] 61. MERGANETTA,

59. SALVADORINA.

Type.

Salvadorina, *Rothsch. & Hartert, Novit. Zool.* i. p. 683 (1894)..... S. waigiuensis.

Range. Confined to Waigiou.

1. Salvadorina waigiuensis.

Salvadorina waigiuensis, *Rothsch. & Hartert, Novit. Zool.* i. p. 683 (1894); *Rothsch. op. cit.* ii. p. 22, pl. iii. (1895).

Adult (?) *male* (type). Head and neck blackish brown, the feathers with narrow pale-brown edges; chin white; rest of upper parts black, with a slight gloss, and barred with white; underparts buffy white, with round brown spots on the lower part of abdomen and under tail-coverts; sides of body broadly barred with brownish black; upper wing-coverts black, barred with white; speculum velvety black, but glossy green on the outer web of the last two secondaries; a white band anteriorly to the speculum at the tip of the last row of the upper wing-coverts; a broad white band at the tip of the secondaries, forming a second alar bar; primaries uniform brown; under wing-coverts black, edged with white, the central ones broadly white at the tip, the greater ones dark grey; axillaries white, spotted with brown along the shaft: bill in dry skin brownish yellow, with the upper part darker, the nail yellowish; feet (in skin) yellowish brown, webs brown. Total length about 17·50

inches, wing 7·5, tail 4·8, outer tail-feathers 3·2, culmen 1·4, tarsus 1·5. (*Rothschild Coll.*)

It seems to me that this extremely singular bird, which Messrs. Rothschild and Hartert have done me the honour of naming after me, has its nearest ally in *Hymenolæmus*; and for the present I think they must both find their place near *Merganetta*, although it is quite possible that they belong to a distinct subfamily. The species of the genera *Hymenolæmus* and *Merganetta* are all mountain-stream Ducks, and I believe it will also be found that *Salvadorina* has the same habits.

Hab. Waigiou.

60. HYMENOLÆMUS.

	Type.
Malacorhynchus, *Wagl.* (*nec Sw.*) *Isis*, 1832, p. 1235	H. malacorhynchus.
Hymenolaimus, *G. R. Gr. Ann. & Mag. N. H.* xi. p. 370 (1843)	H. malacorhynchus.
Hymenolæmus, *Agass. Nom. Zool., Ind. Univ.* p. 190 (1846).	

Range. Confined to the New Zealandian subregion.

1. Hymenolæmus malacorhynchus.

Blue-grey Duck with a soft bill, *Cook, Voy.* i. pp. 72, 97; *Forst. Voy.* i. p. 157 (1777).

Soft-billed Duck, *Lath. Syn.* iii. 2, p. 522, n. 67 (1785).

Anas malacorhynchos, *Gm. S. N.* i. 2, p. 526, n. 59 (1788); *Lath. Ind. Orn.* ii. p. 862, n. 76 (1790); *Bonn. Enc. Méth.* i. p. 12 (1790); *Vieill. N. D.* v. p. 119 (1816); *Dum. Dict. Sc. Nat.* vi. p. 387 (1817); *Ellman, Zoolog.* 1861, p. 7471.

Rhynchaspis malacorhynchos, *Steph. Gen. Zool.* xii. 2, p. 123 (1824).

Malacorhynchus forsterorum, *Wagl. Isis*, 1832, p. 1235; *G. R. Gr. in Dieff. Trav.* ii. App. p. 198 (1843).

Malacorhynchus membrinaceus, part., *Eyt. Mon. Anat.* p. 136 (1838).

Hymenolaimus malacorhynchus, *G. R. Gr. Ann. & Mag. N. H.* xi. p. 370 (1843); *id. List B. Brit. Mus.* iii. p. 142 (1844); *id. & Mitch. Gen. B.* iii. p. 623, pl. 168 (1844); *Rchnb. Syn. Av.*, Natatores, t. 77. f. 893 (1845) (*ex Gray & Mitch.*); *id. Av. Syst. Nat.* p. viii (1852); *G. R. Gr. Ibis*, 1862, p. 241 (syn. emend.); *Hector, New Zeal. Exh.* p. 277 (Otago) (1866); *Haast, J. f. O.* 1868, p. 244; *Hutton, Ibis*, 1870, p. 398 (Auckland); *Finsch, J. f. O.* 1870, p. 358; *Potts, Tr. N. Z. Inst.* ii. 1869, p. 73 (1870), iii. 1870, p. 103 (1871); *Hutt. Cat. B. N. Zeal.* p. 37 (1871); *Finsch, J. f. O.* 1872, p. 187; *Travers, Tr. N. Z. Inst.* iv. 1871, pp. 206, 208 (1872); *Finsch, J. f. O.* 1874, p. 202.

Anas malacorhyncha, *Forst. Icon. ined.* t. 74; *id. Descr. An.* (*ed. Licht.*) p. 94 (1844); *Gieb. Thes. Orn.* i. p. 356 (1872) (syn. emend.).

Hymenolæmus malacorhynchus, *Bp. Compt. Rend.* xliii. p. 651, n. 153 (1856); *Layard, Ibis*, 1863, p. 245 (Napier, E. coast); *Sund. Meth. nat. Av. disp. Tent.* p. 148 (1872); *Buller, Hist. B. New Zeal.* p. 262, pl. — (1873); *Sclat. P. Z. S.* 1876, p. 463 (Zool. Gard.), 1880, p. 527; *Buller, Man. B. New Zeal.* p. 71, pl. xxxi. (upper figure) (1882); *Finsch, Ibis*, 1882, p. 400 (Alpine region); *Sclat. List Vert. An.* 8th ed. p. 441 (1883); *id. P. Z. S.* 1884, p. 389 (Zool. Gard.); *Buller, Hist. B. New Zeal.* 2nd ed. p. 276,

pl. xlv. (upper figure) (1888); *Tristr. Cat. Coll. B.* p. 48 (1889); *Smith, Tr. N. Z. Inst.* xxi. 1888, p. 221 (1889); *Bull. Tr. N. Z. Inst.* xxiv. 1891, p. 86 (fledgling and young) (1892), xxv. 1892, p. 82 (1893).

Hymenolaimus malacorhynchos, *G. R. Gr. Hand-list*, iii. p. 88, n. 10702 (1871).

Fuligula (Hymenolæmus) malacorhyncha, *Rchnw. Orn. Centralbl.* 1882, p. 5; *id. Vög. zool. Gärt.* p. 47 (1882).

Adult male. General plumage lead-blue; the crown of the head and nape with an olive wash, very faint on the rest of the upper parts, the anterior part of the head darker than the rest; breast thickly spotted with chestnut; no speculum on wing; secondaries with a narrow white band at the tip; tertials edged with black on the outer web: "irides bright yellow; bill white horn-colour, the tip and the lateral membrane black; legs and feet dark brown" (*Buller*). Total length about 19 inches, wing 9·5, tail 4·3, culmen 1·65, tarsus 1·95.

Female. "Slightly smaller than the male, but similar in plumage, excepting that there is little or no olive tinge on the head and upper surface, less chestnut on the breast, while there are chestnut spots on the under tail-coverts."

Young. "General plumage lighter, and the underparts whitish; the green gloss which pervades the plumage of the upper parts in the adult almost entirely absent; hind head and nape dull cinereous brown; breast obscurely spotted with dusky and brown, sometimes barred with chestnut at the insertion of the wings; under tail-coverts dull rufous-brown" (*Buller*).

Fledgling. "The colours are those of the adult, but paler. The long, soft, white down is still present on the throat and lower side of the cheeks, whilst broken or irregular lines of the same proceed from the frontal base and from the sides of the upper mandible, and become scattered beyond the eyes. The dull olive-green down, with long disunited filaments, still adheres to the crown and other portions of the upper surface, being most pronounced immediately above the tail. The bill is slaty brown (in the dried specimen), the terminal points of both mandibles and the serrated edges being dull yellow" (*Buller*).

Young in down. "Bill horn-colour, lightest on the lower mandible, unguis rosy at the point; membranous appendage slaty black, well overlapping the lower mandible, furnished with lamellæ along its basal half, which work against the finely-serrated sides of the compressed basal half of the lower mandible: body covered with thick down, longest on the back; upper surface dull green, brightest on the back; over and behind the eye irregular streaks of white; under surface white; wings and upper part of thighs brownish: tail green above, at each side a patch of chestnut; under surface of the tail chestnut; legs and feet yellowish flesh-colour" (*Potts*).

Hab. Mountain-streams of New Zealand.

a, *b*. Ad. sk. et st.	New Zealand.	New Zealand Co. [P.].
c. Ad. st.	New Zealand.	P. Earl, Esq. [P.].

d. Ad. sk.	New Zealand.	Capt. Sir G. Grey [P.].
e. ♂ ad. sk.	Dusky Bay, New Zealand, Feb. (*Dr. Lyall*).	Capt. Stokes [P.].
f, *g*. ♂ ad. et imm. sk.	Eglinton River, S. Island, N. Zealand, Feb.	Colonial Museum [P.].
h. Skeleton.	Otago, New Zealand.	Otago Museum [P.].

61. MERGANETTA.

Type.

Merganetta, *Gould*, *P. Z. S.* 1841, p. 95 ..... M. armata.

Raphipterus, *Gay*, *Atlas de la Hist. fis. y polit. de Chile*, pl. — (1844, *fide Des Murs*, *Icon. Orn.*, *genre* Merganetta, p. 2, 1845) ..... M. armata.

Rhaphipterus, *Des Murs in Gay*, *Hist. de Chile*, *Zool.* i. p. 459 (1848).

Range. Confined to the Andes.

Key to the Species.

a. Lower parts not uniform cinnamon or reddish fulvous. (*Males*.)
  a'. Anterior part of the cheeks below the eyes and throat black, like the breast.
    a''. White of the superciliary stripe separated by a vertical black band from the triangular white patch before the eyes ..... *frænata*, p. 458.
    b''. White of the superciliary stripe continuous with the white of the triangular patch before the eyes..... *armata*, p. 458.
  b'. Cheeks and throat white.
    c''. Breast and flanks black; feathers of the back edged with rufous-brown ..... *turneri*, p. 460.
    d''. Breast and flanks not black, but whitish, the feathers with dusky mesial spots or stripes.
      a'''. Feathers of the back and scapulars edged with greyish white, lower parts tinged with pale reddish..... *garleppi*, p. 460.
      b'''. Feathers of the back and scapulars edged with olive-brown.
        a^1. Ground-colour of breast and abdomen whitish with a slight rusty tinge .... *leucogenys*, p. 461.
        b^1. Ground-colour of breast and abdomen white..... *columbiana*, p. 462.

b. Lower parts uniform cinnamon or reddish fulvous. (*Females*).
  c'. Hind part of the cheeks and sides of the neck undulated with grey and black narrow bands.
    c''. Underparts of a deep cinnamon colour.
      c'''. Under wing-coverts uniform lead-grey.. *armata*, p. 458.
      d'''. Under wing-coverts lead-grey, undulated with whitish (*Taczanowski*)..... *leucogenys*, p. 461.
    f'. Underparts of a cinnamon colour, lighter than in the female of *M. armata* ..... *turneri*, p. 460.
  d'. Hind part of the cheeks and sides of the neck like the whole of the underparts, uniform fulvous ..... *columbiana*, p. 462.

1. Merganetta frænata, sp. n. (Plate V.)

Adult male. Similar to the male of *M. armata*, but differs in having a black band over and before the eyes joining the black of the pileum, so that on the lores, anteriorly, there is a triangular white patch completely separated from the white superciliary stripe; the lower parts are of a paler reddish than in *M. armata*, and the feathers with broader mesial black stripes; lower abdomen and under tail-coverts blacker. Total length about 18 inches, wing 7, tail 4·4, culmen 1·2, tarsus 1·6.

Female. Unknown.

Hab. Chili, but the exact locality unknown.

a. ♂ ad. sk. Central Chili. H. Berkeley James, Esq. [P.]. (Type of the species.)

2. Merganetta armata.

Anas ——?, *Bridges, P. Z. S.* 1841, p. 95 (Andes of Chili).

Merganetta armata, *Gould, P. Z. S.* 1841, p. 95 (Andes of Chili); *Fraser, P. Z. S.* 1843, p. 119; *G. R. Gr. List B. Brit. Mus.* iii. p. 148 (1844); *Gray & Mitch. Gen. B.* iii. p. 628, pl. 170 (♂) (1844); *Rchnb. Syn. Av.*, Natatores, t. 78. f. 897 (1845) (*ex Gr. & Mitch.*); *Des Murs, Icon. Orn.* pl. 48 (♀, Chili) (1847); *G. R. Gr. Gen. B.*, App. p. 28 (part.) (1849); *Rchnb. Syn. Av.*, Natatores, t. 79. ff. 3223–24 (1850); *id. Av. Syst. Nat.* p. ix, tab. vi. (1852); *Hartl. Naumannia*, 1853, p. 222; *Bibra, Denkschr. Akad. Wien*, v. p. 132 (1853); *Licht. Nomencl. Av.* p. 103 (1854); *Bibra, J. f. O.* 1855, p. 57; *Bp. Compt. Rend.* xliii. p. 652, n. 164 (1856); *Cass. U.S. Astron. Exped.* ii. p. 204 (1856); *Sclat. P. Z. S.* 1867, p. 340; *Sclat. & Salv. Exot. Orn.* p. 200 (1869); *Eyt. Syn. Anat.* p. 140 (part.) (1869); *G. R. Gr. Hand-list*, iii. p. 90, n. 10725 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *iid. P. Z. S.* 1876, p. 406; *Sclat. P. Z. S.* 1880, p. 530; *Crawford, Across the Pampas and Andes*, pp. 235, 236 (1884); *Berk. James, New List Chil. B.* p. 10, n. 163 (1892).

Raphipterus chilensis, *Gay, Atlas Hist. fis. y polit. de Chile*, pl. — (1844).

Merganetta chilensis, *Des Murs, Icon. Orn.* pl. 5 (♂) (1845); *Eyt. Syn. Anat.* p. 141 (syn. emend.) (1869).

Rhaphipterus chilensis, *Des Murs, in Gay's Hist. de Chile, Zool.* i. p. 459 (1848); *Phil. & Landb. Cat. Av. Chile*, p. 43 (1868).

Biziura armata, *Schleg. Mus. P.-B.*, Anseres, p. 12 (syn. emend.) (1866); *Gieb. Thes. Orn.* i. p. 467 (syn. emend.) (1872).

Rhaphipterus armatus, *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Rchnw. Orn. Centralbl.* 1882, p. 3; *id. Vög. zool. Gärt.* p. 42 (1882); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 350 (1890).

Adult male. Head and neck white; crown, a stripe along the middle of the hind neck, two bands starting behind the eyes and running down on the sides of the hind neck, anterior part of the cheeks, throat and breast deep black; a superciliary stripe confluent on the occiput and a triangular patch on the lores white; feathers of the back and scapulars long and narrow, black along the middle

and broadly edged with white on both webs: lower back and rump of a lead-colour; upper tail-coverts minutely banded with blackish and whitish; breast and abdomen rufous, with black streaks along the middle of the feathers; sides and flanks blackish, finely dotted more or less with rufous; under tail-coverts blackish, stained more or less with rufous and grey; wing-coverts bluish lead-colour; speculum on the secondaries glossy green; two white bands across the wings, one at the tip of the greater coverts, the other at the tip of the secondaries; primaries brown; tertials of a bluish lead-colour; under wing-coverts and axillaries greyish; tail-feathers greyish brown, with the shafts whitish above, pure white below: bill yellow; feet reddish; "iride castanea" (*Museo Chileno*). Total length about 17 inches, wing 7·25, tail 5·25, culmen 1·4, tarsus 1·6.

Female. Upper part of the head and middle of the nape of a lead-colour; posterior half of the cheeks and sides of the neck with narrow black and grey bands; anterior part of the cheeks, throat, breast, abdomen, and under tail-coverts of a bright cinnamon-colour; feathers of the back and scapulars black along the middle, edged with grey on both webs; lower back, rump, upper tail-coverts, wings, and tail as in the male. In size somewhat less than the male.

Young male. Upper parts almost the same as in the females, but the upper part of the head of a dull brown-grey; on the head many black feathers, showing the transition from youth to adult stage; lower parts white; sides barred with white and blackish brown; a few cinnamon feathers on the abdomen and under tail-coverts, showing that young males also pass through the female plumage.

Young in down. Upper parts pale brown, underparts white; sides of the head white, with a brown band from behind the eye to the occiput; a white patch on the interscapular region; two white bands from the scapular region along the sides of the back and rump to the sides of the base of the tail; wings pale brown, broadly edged with white on the posterior edge; tail-feathers much developed, whitish, freckled with brown, and with a subapical brown band and a white one at the tip (*Mus. Turin*).

Hab. Rivers of the Chilian Andes.

a. ♂ juv. sk.	Chili.	Old Coll.
b, c. ♂ ♀ ad. st.	Chili.	T. Bridges, Esq. [C.]. (Types of the species.)
d, e. ♂ ♀ ad. st.	Chili.	T. Bridges, Esq. [C.].
f, g. ♀ imm. et ♂ juv. st.	Chili.	Purchased.
h–o. ♂ ♀ ad. et ♂ juv. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
p. ♂ ad. sk.	Colchagua, Chili, June (*Weiss-haupt*).	Salvin-Godman Coll.
q. ♂ imm. sk.	Chilian Andes (*E. C. Reed*).	Salvin-Godman Coll.
r–u. ♂ ♀ ad. et ♀ juv. sk.	Andes (of Chili?) (*Bridges*).	Eyton Coll.
v. Skeleton.		

3. Merganetta turneri.

Merganetta leucogenys, *Sclat. & Salv.* (*nec Tsch.*) *P. Z. S.* 1869, p. 157 (S. Peru, Tinta, Rivers of the Cuzcan Andes).
Merganetta turneri, *Sclat. & Salv. P. Z. S.* 1869, p. 600; *iid. Exot. Orn.* p. 199, t. 100 (1869); *G. R. Gr. Hand-list*, iii. p. 91, n. 10726 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *iid. P. Z. S.* 1874, p. 679; *iid. P. Z. S.* 1876, p. 407; *Sclat. P. Z. S.* 1880, p. 532; *Taez. Orn. Pér.* iii. p. 488 (1886).
Biziura turneri, *Gieb. Thes. Orn.* i. p. 468 (1872).
Rhaphipterus turneri, *Rchnw. Orn. Centralbl.* 1882, p. 3.

Adult male. Neck and sides of the head white; pileum black, the black continued in a black nuchal band; a narrow band surrounding the bill, a spot before the eyes, and a band from the eyes along the sides of the neck black; a broad superciliary band extending on both sides of the back of the neck white; lower part of the neck, upper breast, and flanks black; feathers of the back and scapulars black, edged on both sides with rufous-brown; rump lead-colour, sides of the rump and upper tail-coverts undulated with narrow black and white-grey lines; lower breast and abdomen dark reddish grey, the feathers with broad mesial black streaks; vent and under tail-coverts almost entirely black, only some feathers partly undulated with black and grey lines; wings exactly as in *M. armata*; tail brown, with the shaft paler above, white underneath. Total length about 17 inches, wing 7·4 (not 6·4 as stated in the original description), tail 5, culmen 1·2, tarsus 1·6.

Female. Similar to the female of *M. armata*, only the cinnamon-colour of the underparts paler.

Hab. Andes of Southern Peru.

a. ♂ ad. sk.	Tinta, S. Peru (*Turner*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Tinta, S. Peru, July (*H. Whitely*).	Salvin-Godman Coll. (Types of the species.)

4. Merganetta garleppi.

? Merganetta leucogenys, *Boeck, Mitth. orn. Ver. in Wien*, 1884, p. 164 (Bolivia) (Extract, p. 25).
Rhaphipterus leucogenys, part., *Rchnw. Orn. Centralbl.* 1882, p. 3 (Bolivia).
Merganetta garleppi, *Berl. Orn. Monatsber.* ii. p. 110 (1894) (Bolivia and Tucuman).

Adult male (type). Very similar to the male of *M. armata* on the upper parts, having the feathers of the back edged with white; but differs in having the edges of the scapulars not pure white, but grey, sprinkled with black dots; no black band across the breast, which is whitish, changing into pale reddish white on the lower parts; sides of the head white, with a small black spot anteriorly to the eyes as in *M. columbiana*; under wing-coverts uniform lead-grey; under tail-coverts blacker than in *M. columbiana*, to *which perhaps it is most nearly related*. The wing-speculum apparently

broader than in the allied species. Total length about 17 inches, wing 7, tail 4·75, culmen 1·06, tarsus 1·6 (*Mus. Berlepsch*).

Female. Unknown.

Hab. Bolivia and Tucuman.

a. ♂ ad. sk.	No locality.	Gould Coll. (Compared with the type.)

5. Merganetta leucogenys.

Anas leucogenis (*sic*), *Tsch. Wiegm. Arch.* 1843, i. p. 390 (Andes of Peru); *Gieb. Thes. Orn.* i. p. 355 (1872).

Erismatura leucogenys, *Tsch. Wiegm. Arch.* 1844, i. p. 316, n. 348.

Merganetta leucogenys, *Tsch. Fauna Per., Aves*, pp. 55, 311, t. xxxvi. (1846); *Rchnb. Syn. Av.*, Natatores, t. 79. f. 2325 (1850) (*ex Tschudi*); *Bp. Compt. Rend.* xliii. p. 652, n. 165 (part.) (1856); *Sclat. & Salv. P. Z. S.* 1869, p. 601 (part.); *iid. Ecot. Orn.* p. 200 (part.) (1869); *G. R. Gr. Hand-list*, iii. p. 91, n. 10727 (part.) (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (part.) (1873); ? *Tacz. P. Z. S.* 1874, p. 554 (Maraynioc, Centr. Peru); ? *Sclat. & Salv. ibid.* pp. 678, 679 (Upper Andes); *iid. P. Z. S.* 1876, p. 408 (part); ? *Tacz. P. Z. S.* 1879, p. 243 (Tumbez, N. Peru); *Sclat. P. Z. S.* 1880, p. 531 (part.); *Tacz. Orn. Pér.* iii. p. 486 (1886).

Merganetta armata, part., *G. R. Gr. Gen. B.*, App. p. 28 (1849).

Biziura armata, part., *Schleg. Mus. P.-B.*, Anseres, p. 12 (1866); *Gieb. Thes. Orn.* i. p. 467 (part.) (1872).

? Merganetta armata, fem., *Eyt. Syn. Anat.* p. 140 (1869).

Rhaphipterus leucogenys, part., *Rchnw. Orn. Centralbl.* 1882, p. 3 (N. Peru).

Adult male (type). Similar to *M. columbiana*, but the brown colour of the edges of the feathers of the mantle and scapulars a shade darker: a ring of black feathers round the neck sharply defines the white of the upper part of the neck; breast, abdomen, and under tail-coverts whitish with a slight rusty tinge. Size of *M. columbiana*.

Female. I have not seen a bird of this sex which I could surely attribute to *M. leucogenys*; a *female* from Maraynioc (if really belonging to *M. leucogenys*) is described by Taczanowski as having the sides of the neck and the posterior part of the head grey finely vermiculated with black, and in this respect differs from the female of *M. columbiana*, and resembles *M. armata* and *M. turneri*, but it differs from them in having the marginal under wing-coverts undulated with whitish.

Young in down from Tumbez, Northern Peru. "White, upper part of the head, a postocular stripe, a band on the hind neck extended to the back, wings, and a broad band on each side of the back brown; tail-feathers long, stiff, and with the *barbes rares*" (*Taczanowski*).

This species is wanting in the British Museum, but, thanks to Prof. Paul Godet, Director of the Museum of Neuchâtel, I have

been able to examine the type, which he has kindly sent to me in London for inspection and comparison.

Specimens from different localities in Northern Peru require comparison.

Hab. Andes of Peru, on the sources of the Aynamayo (*Tschudi*).

6. Merganetta columbiana.

Merganetta colombiana, *Des Murs, Rev. Zool.* 1845, p. 179 (Mus. Paris); *id. Icon. Orn.* pl. vi. (1845); *Rchnb. Syn. Av.*, Natatores, t. 111. f. 1079 (1845) (*ex Des Murs*).

Merganetta columbiana, *Sclat. P. Z. S.* 1855, p. 164; *Sclat. & Salv. P. Z. S.* 1869, p. 601 (part.).

Merganetta armata, part., *G. R. Gr. Gen. B.*, App. p. 28 (1849).

Merganetta leucogenys, part., *Bp. Compt. Rend.* xlii. p. 652, n. 165 (1856); *Sclat. & Salv. P. Z. S.* 1869, p. 601 (part.); *id. Exot. Orn.* p. 200, n. 3 (part.) (1869); *G. R. Gr. Hand-list*, iii. p. 91, n. 10727 (part.) (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (part.) (1873); *id. P. Z. S.* 1876, p. 408 (part., Ecuador), 1879, p. 543 (Frontino); *Sclat. P. Z. S.* 1880, p. 531 (part.); *Berl. Orn. Monatsber.* ii. p. 111 (Merida, Venezuela) (1894).

Biziura armata, part., *Schleg. Mus. P.-B.*, Anseres, p. 12 (1866); *Gieb. Thes. Orn.* i. p. 467 (part.) (1872).

Rhaphipterus leucogenys, part., *Rchnw. Orn. Centralbl.* 1882, p. 3 (part., Columbia); *Heine & Rchnw. Nomencl. Mus. Hein. Orn.* p. 350 (Merida, New Granada) (1890).

Adult male. Sides of the head and neck white; pileum black, the black continuous with a black band along the hind part of the nape; a narrow black band surrounds the base of the bill; anteriorly to the eyes a black spot, posteriorly a black band, which extends along the sides of the hind neck; a white superciliary band, continuous with a white band on the sides of the mesial nuchal black band, so that on the hind neck there are three black bands—a mesial one broader, and two narrow on the sides, and between these black bands two white ones; feathers of the back and scapulars black, broadly edged with olive-brown on both webs; rump and upper tail-coverts undulated with narrow white-grey and black lines or bars; breast, abdomen, and under tail-coverts white, each feather with a mesial blackish mark, freckled with white; upper wing-coverts lead-grey; speculum on the secondaries glossy green, bounded by two white bands, one at the tip of the greater wing-coverts, the other at the tip of the secondaries; primaries brown, tertials of a lead-colour; under wing-coverts lead-colour, finely undulated with whitish; tail dull grey, the shafts of the feathers white underneath: bill yellow, with the culmen black in dry skins; tarsus reddish. Total length about 15 inches, wing 6·3, tail 5, culmen 1·1, tarsus 1·55.

Female. Similar to the female of the allied species, but the lower parts of a much lighter fulvous colour, and easily distinguished by having the sides of the neck uniform with the lower parts, and not grey finely barred with dusky; upper part of the head, hind neck, and back grey; hind neck finely dotted with

paler markings; feathers of the back and scapulars black, edged with grey; rump and wings as in the male; a small spot above and before the eyes fulvous like the cheeks and the whole of the underparts.

Young male. Upper part of the head and hind neck grey; feathers of the back black, with olive-brown edges; lower parts white; sides barred with white and dusky; wings as in the adult male, but the speculum partly lead-colour with some paler dottings, only on the upper part with a green lustre.

Hab. Andes of Columbia and Ecuador, and also Venezuela*.

a. ♂ ad. sk.	Sta. Martha, New Granada.	Salvin-Godman Coll.
b. ♀ ad. sk.	Frontino, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Bogota.	Gould Coll.
d. ♂ ad. sk.	Ecuador (*Higgins*).	Salvin-Godman Coll.
e, *f*. ♂ ad. sk.	Rio Blanco, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
g. ♂ juv. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll.

Subfamily XI. MERGINÆ †.

Key to the Genera.

a. Culmen shorter than tarsus ..... 62. MERGUS, p. 463.
b. Culmen longer than tarsus.
  a'. Serrations of both mandibles short, blunt, and not distinctly inclined backwards at tips ..... 63. LOPHODYTES, p. 468.
  b'. Serrations of both mandibles very conspicuously tooth-like, and strongly inclined backwards at tips ..... 64. MERGANSER, p. 471.

62. MERGUS.

Type.

Mergus, *Linn. S. N.* i. p. 207 (1766); *Leach, Syst. Cat. M. & B. Brit. Mus.* p. 36 (1816); *Steph. Gen. Zool.* xii. 2, p. 156 (1824) ..... M. albellus.
Mergellus, *Kaup* (cf. *Naumannia*, 1855, p. 299); *Selby, Cat. Gen. & Subgen. B.* p. 47 (1840)..... M. albellus.

Range. Palæarctic Region.

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* I have seen in the Rothschild collection a female specimen, apparently belonging to this species, marked as from Venezuela.

† The species of this subfamily have the sternum fenestrated posteriorly, like the species of the genus *Clangula*, to which they show a great resemblance also in coloration.

1. Mergus albellus.

The Smew.

Mergus tinus, *Hasselq. Itin.* p. 269, n. 37 (1757); *id. Reise* (*ed. Linn.*), p. 322, n. 37 (1762).

Merganser cristatus minor *sive* albellus, *Briss. Orn.* vi. p. 243, pl. xxiv. ff. 1 (♂), 2 (♀) (1760).

Merganser stellatus, *Briss. op. cit.* p. 252 (1760).

Mergus glacialis, *Brünn. Orn. Bor.* p. 24, n. 99 (1764).

Mergus albellus, *Linn. S. N.* i. p. 209, n. 5 (1766); *Gm. S. N.* i. 2, p. 147, n. 5 (1788); *Lath. Ind. Orn.* ii. p. 831, n. 6 (1790); *id. Trans. Linn. Soc.* viii. p. 126, t. xvi. ff. 3, 4 (trachea) (1798); *Pall. Zoogr. Rosso-As.* ii. p. 289 (Siberia) (1811); *Wils. Am. Orn.* viii. p. 126, pl. lxxi. (America?) (1814); *Temm. Man.* p. 581 (1815); *id. op. cit.* 2nd ed. ii. p. 887 (1820); *Dum. Dict. Sc. Nat.* xx. p. 295 (1821); *Boie, Isis,* 1822, p. 564; *Licht. Verz. Doubl.* p. 85 (1823); *Steph. Gen. Zool.* xii. 2, p. 157 (1824); *Bp. Obs. Nomencl. Wils.* n. 250 (1825); *Ranz. Elem. di Zool.* iii. pt. ix. p. 148 (1826); *Bp. Specch. Comp.* p. 74, n. 238 (Rome), n. 263 (Philadelphia) (1827); *Less. Man. d'Orn.* ii. p. 420 (1828); *Brehm, Isis,* 1830, p. 999, n. 1; *id. Vög. Deutschl.* p. 941 (1831); *Less. Tr. d'Orn.* p. 635 (1831); *Savi, Orn. Tosc.* iii. p. 118 (1831); *Nutt. Man.* ii. p. 467 (1834); *Strickl. P. Z. S.* 1836, p. 102 (Smyrna); *Gould, B. Eur.* pl. 387 (1837); *Aud. Orn. Biogr.* iv. p. 350, pl. 347 (1838); *Eyt. Mon. Anat.* p. 178, pl. 3. f. 6 (sternum) (1838); *Bp. Comp. List,* p. 59, n. 432 (Europe), n. 398 (America) (1838); *Aud. Syn.* p. 299 (New Orleans) (1839); *Temm. Man. d'Orn.* iv. p. 559 (Japan) (1840); *K. & B. Wirbelth. Eur.* pp. lxxxviii, 232 (1840); *Bp. Cat. Met. Ucc. Eur.* p. 74 (1842); *Aud. B. Amer.* vi. p. 408, pl. 414 (1843); *Schleg. Rev. Crit.* p. cxxii (1844); *Naum. Vög. Deutschl.* xii. p. 314, t. 324 (1844); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *Degl. Orn. Eur.* ii. p. 483 (1849); *Temm. & Schleg. Faun. Jap.*, Aves, p. 129 (1850); *Midd. Sibir. Reis.* ii. p. 238 (1853); *Wolley, Ibis,* 1859, pp. 69–76 (Lapland); *Schrenck, Vög. d. Amur-Lande,* p. 486 (1860); *Irby, Ibis,* 1861, p. 251 (Oudh and Kumaon); *Swinh. ibid.* p. 344 (N. China); *Gould, B. of Gt. Brit.* v. pl. 37 (pt. ii., 1862); *Swinh. P. Z. S.* 1863, p. 322; *Radde, Reis. in S. O.-Sibir.* ii. p. 379 (1863); *G. R. Gr. List Brit. B.* p. 213 (1863); *Wright, Ibis,* 1864, p. 291 (Malta); *Nordm. J. f. O.* 1864, p. 379 (Finland and Lapland); *Schleg. Mus. P.-B.*, Anseres, p. 6 (1866); *Degl. & Gerbe, Orn. Eur.* ii. p. 573 (1867); *Przew. Voy.* n. 214 (1867); *Wiese, J. f. O.* 1867, p. 83 (Greiswald, breeding!); *Tristr. Ibis,* 1868, p. 328 (Palestine); *Dyb. & Parr. J. f. O.* 1868, p. 339 (Dauria); *Przew. Putesch Ussur.* n. 214 (1870); *Wright, Ibis,* 1870, p. 492 (Malta); *Homey. J. f. O.* 1870, p. 434; *Saund. Ibis,* 1871, p. 397 (S. Spain); *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 433 (1871); *Fritsch, J. f. O.* 1872, p. 372 (Bohemia); *Brooke, Ibis,* 1873, p. 345 (Sardinia); *Severtz. Turkest. Jevotn.* p. 70 (1873); *Tacz. J. f. O.* 1874, p. 337; *Dress. B. Eur.* vi. p. 699, pls. 454, 455 (1874); *Irby, Orn. Str. Gibralt.* p. 206 (1875); *Gieb. Thes. Orn.* ii. p. 569 (1875); *Dress. Ibis,* 1876, p. 421 (Turkestan); *Seeb. & H.-Brown, Ibis,* 1876, p. 448 (Lower Petchora); *Palm. J. f. O.* 1876, p. 61 (Finland); *Blanf. East. Pers.* ii. p. 303 (1876); *Tacz. Orn. Faun. Vost. Sibir.* p. 72 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 49 (1877); *Prjev. in Rowl. Orn. Misc.* iii. p. 108 (Mongolia)

(1878); *Finsch, Verh. z.-b. Ges. Wien*, 1879, p. 154; *Sclat. P. Z. S.* 1880, p. 531; *Brandt, J. f. O.* 1880, p. 250; *Salv. Cat. B. Strickl. Coll.* p. 541 (1882); *Severtz. Ibis*, 1883, p. 77 (Pamir Range); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 345 (Kamtschatka) (1883); *B. O. U. List B it. B.* p. 137 (1883); *Sclat. List Vert. An.* 8th ed. p. 442 (1883); *Tristr. Faun. & Flor. of Palest.* p. 118 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 499 (1884–85); *Seeb. Hist. Brit. B.* p. 636, pl. 67 (egg) (1885); *Scully, J. A. S. B.* lvi. p. 89 (1887); *Reid, Str. Feath.* x. p. 85 (Lucknow) (1887); *Dörries, J. f. O.* 1888, p. 95 (E. Siberia); *Seeb. B. Jap. Emp.* p. 259 (1890); *Rchnw. J. f. O.* 1890, p. 84; *Hartert, Kat. Vogelsamml* p. 234 (1891); *Lilford, Col. Fig. Brit. B.* pt. xix. pl. — (1891); *Sharpe, Cat. Ost. Specim. R. C. S.* iii. p. 312 (1891); *Dub. Faun. Vert. Belg., Ois.* ii. p. 509, pl. 273 (1893); *Wallengr. J. f. O.* 1893. p. 168 (Sweden).

Mergus minutus, *Linn. S. N.* i. p. 209, n. 6 (1766); *Gm. S. N.* i. 2, p. 148, n. 6 (1788); *Lath. Ind. Orn.* ii. p. 832, n. 7 (1790); *Bechst. Orn. Taschenb.* ii. p. 400 (1803); *Vieill. N. D.* xiv. p. 233 (1817); *Dum. Dict. Sc. Nat.* xx. p. 296 (=albellus ♀) (1821); *Brehm, Isis*, 1830, p. 999, n. 2; *id. Vög. Deutschl.* p. 942 (1831).

Mergus albulus, *Scop. Ann.* i. *Hist. Nat.* p. 71, n. 91 (1769); *v. Paula Schrank, Faun. Boica*, i. p. 237 (1798).

Mergus pannonicus, *Scop. l. c.* p. 72, n. 92 (1769).

Merganser cinereus, *Gerini, Stor. degli Ucc.* v. t. 511 (♂ juv.) (1776).

Merganser minor, *Gerini, op. cit.* t. 513 (♂), t. 514 (♀) (1776).

Piette, *D'Aubent. Pl. Enl.* 449 (♂), 450 (♀); *Buff. Hist. Nat. Ois.* viii. p. 275, pl. 24 (1781).

Harle étoilé, *Buff. op. cit.* viii. p. 278 (1781).

Merganser albellus, *Bodd. Tabl. Pl. Enl.* p. 27, n. 449 (1783); *Bonn. Enc. Méth.* i. p. 104, pl. 27. f. 4 (Amérique Septentrional!) (1790).

Smew, *Lath. Syn.* iii. p. 428, n. 5 (1785).

Minute Merganser, *Lath. ibid.* p. 429, n. 6 (1785).

? Mergus furcifer, *Beseke, Schr. der berl. naturf. Ges.* vii. p. 458 (1787); *Gm. S. N.* i. 2, p. 148, n. 7 (1788); *Lath. Ind. Orn.* ii. p. 832, n. 8 (1790); *Vieill. N. D.* xiv. p. 224 (1817); *Dum. Dict. Sc. Nat.* xx. p. 297 (1821); *Ranz. Elem. di Zool.* iii. pt. ix. p. 151 (note) (1826).

Merganser minutus, *Bonn. Enc. Méth.* i. p. 105 (1790).

? Merganser furcifer, *Bonn. l. c.* p. 105 (1790); *Steph. Gen. Zool.* xii. 2, p. 172 (1824).

Mergus mustelinus, *Bechst. Orn. Tasch.* ii. p. 401 (1803) (young male).

Mergus panocicus, *Bechst. l. c.* p. 402 (1803) (young female).

Mergus maculatus, *Bechst. l. c.* p. 402 (1803).

Mergellus albellus, *Selby, Cat. Gen. & Subgen. B.* p. 47 (1840); *G. R. Gr. List B. Brit. Mus.* iii. p. 147 (1844); *id. Gen. B.* iii. p. 629 (1844); *Rchnb. Syn. Av.*, Natatores, t. 73. ff. 85–87 (1845); *id. Av. Syst. Nat.* p. ix, tab. vii. (1852); *Licht. Nom. Av.* p. 103 (1854); *Bp. Compt. Rend.* xliii. p. 652, n. 172 (1856); *Loche, Cat. Mamm. et Ois. Alg.* p. 146 (1858); *Baird, B. N. Am.* p. 817 (1858); *id. Cat. N. Am. B.* n. 614 (1859); *Jerd. B. of Ind.* iii. p. 818 (N. India) (1864); *G. R. Gr. Hand-list*, iii. p. 90, n. 10734 (1871); *Swinh. P. Z. S.* 1871, p. 416 (China); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Tacz. J. f. O.* 1873, p. 111; *Hume, Str. Feath.* i. p. 265 (N. India) (1873); *Butler, Str. Feath.* iv. p. 31 (N. Guzerat) (1876); *Hume, ibid.*; *Scully, ibid.* p. 202 (Yarkand) (1876); *David & Oust. Ois. Chine*, p. 509 (1877); *Blakist. &*

Pryer, Ibis, 1878, p. 215 (Japan); *Seeb. Ibis*, 1879, p. 23 (Japan); *Hume, Str. Feath.* viii. p. 115, n. 973 (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 293, pl. 39 (1880); *Bolau, J. f. O.* 1880, p. 65; *C. Swinh. Ibis*, 1882, p. 125 (S. Afghanistan); *Rchnw. Orn. Centralbl.* 1882, p. 3; *id. Vög. zool. Gürt.* p. 42 (1882); *B., B., & R. Water-B. N. Am.* ii. p. 124 (1884); *Radde, Ornis Caucas.* p. 466 (1884); *Stejn. Bull. U.S. Nat. Mus.* no. 29, p. 178 (Bering I.) (1885); *Salvad. El. Ucc. Ital.* p. 269 (1886); *Tristr. Cat. Coll. B.* p. 46 (N. America) (1889); *Sharpe, Trans. Linn. Soc.* (2) *Zool.* v. p. 92 (1889); *id. Sec. Yark. Miss., Aves*, p. 133 (1891).

Mergellus minutus, *Brehm, Naumannia*, 1855, p. 299.

Mergulus (*lapsu*) albellus, *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 187 (1880), x. p. 101 (1882); *Blakist. Amend. List B. Jap.* p. 9 (1884).

Adult male. General colour white; a black patch on the lores, surrounding also the eyes; lower part of the crest black, with a green gloss, forming a V-shaped mark on the sides of the occiput; back and rump black; upper tail-coverts grey, with lighter edges; scapulars white, with a black band along the outer edge; two crescentic black bands on the sides of the breast; sides and flanks narrowly waved with dark grey lines; marginal wing-coverts blackish, the central ones white, the greater ones, like the secondaries, black, banded at the tip with white; primaries blackish brown; tertials grey; marginal under wing-coverts greyish brown, the central ones and the axillaries white; tail dark grey: bill of a bluish lead-colour, the nail lighter; irides bluish white; legs and feet light bluish lead, webs darker. Total length about 17 inches, wing 7·6, tail 4, culmen 1·25, tarsus 1·15.

Female. Upper part of the head and nape chestnut-brown, rest of the upper parts brown-grey, darker on the back and rump; a brown-black patch covers the lores and the cheeks; throat and sides of the neck pure white; crop-region grey; underparts white, sides and flanks brown-grey; scapulars brown-grey, like the back; wings as in the male, only duller; tertials brown; tail brown-grey.

Young. Similar to the adult female, but the space between the base of the bill and the eye, and also the cheeks, are chestnut instead of black; there are more dark feathers on the crop-region and flanks, and the white patch on the wing is suffused with brown, especially in the young females.

Males in first nuptial dress have brown streaks on the hind-neck and scapulars (*Seebohm*).

Males in moulting-plumage resemble adult females, but show the two dark crescentic bands on the sides of the breast.

Young in down. Upper parts, including the sides of the head below the eye, but only the back of the neck, dark brown; below the eye a very small white spot; white spots on the posterior edge of the wing, on the sides of the back, just near the joint of the wing, the sides of the rump, and on the flanks; throat and sides of the upper part of the neck conspicuously white; crop-region dusky; flanks brown; breast and abdomen white.

Hab. Northern Palæarctic Region, from the Baltic to Behring

Island in summer; south in winter from the basin of the Mediterranean to Northern India, China, and Japan; occasionally in Northern America.

a, b. ♂ ♀ ad. st.	Great Britain.	Purchased.
c, d, e. ♂ ♀ ad. et ♂ juv. st.	Great Britain.	J. Meyer, Esq. [P.].
f. ♀ ad. st.	Great Britain.	Joseph Sabine, Esq. [P.].
g. ♀ ad. sk.	Dovey R., Merionethshire, Feb.	J. Moray Brown, Esq. [P.].
h. ♀ ad. sk.	Yarmouth, Norfolk, Jan. (*Gunn*).	Seebohm Coll.
i. ♀ ad. sk.	Yarmouth, Norfolk, Jan.	Capt. H. W. Feilden [P.].
k. ♂ ad. sk.	Beccles, Suffolk, Feb.	Seebohm Coll.
l, m. ♂ ad. st. et ♂ juv. sk.	Gloucestershire.	Montagu Coll.
n. Juv. sk.	Devonshire.	Montagu Coll.
o. ♂ juv. st.	Wales.	Montagu Coll.
p. ♂ ad. st.	Archangel (*Hencke*).	R. Bowdler Sharpe, Esq. [P.].
q. ♀ ad. sk.	Kurnieshycha; ? Petchora, Aug.	Seebohm Coll.
r. Juv. sk.	Mesopotamia (*Jones*).	India Museum [P.].
s, t. ♂ ♀ juv. sk.	Lenkoran, Dec.	Seebohm Coll.
u. ♂ juv. sk.	Bala Morghab, Dec. (*Aitchison*).	Afghan Delim. Commission [P.].
v, w. ♀ ad. sk.	Kandahar, Jan., March.	Lt.-Col. Swinhoe [P.].
x. ♀ ad. sk.	Kandahar, Jan. (*Swinhoe*).	Seebohm Coll.
y. ♀ juv. sk.	Azgar, Banks of Indus.	Major Yerbury [P.].
z. ♀ ad. sk.	River Jheelum, Nov. (*A. O. H.*).	Hume Coll.
a', b'. ♂ ad. et juv. sk.	Eastern Narra, Sind, Dec., Jan. (*A. O. H.*).	Hume Coll.
c'–p'. ♂ ♀ ad., imm. et juv. sk.	Delhi, Jan.	Hume Coll.
q'–w'. ♂ ♀ ad. et imm. sk.	Gurgaon, Jan. to Mar. (*W. N. Chill*).	Hume Coll.
x', y'. ♀ juv. sk.	Sultanpur, Dec.	Hume Coll.
z'–b''. ♀ ad. et ♂ juv. sk.	Murdan, Jan. (*Nundram*).	Hume Coll.
c''. ♀ ad. sk.	Punjab.	H. C. V. Hunter, Esq. [P.].
d''–g''. ♂ ♀ ad. et juv. sk.	Mynpoorie, Jan., Feb.	Hume Coll.
h'', i'', k''. ♂ ♀ ad. et ♂ juv. sk.	Bengal (*Falconer*).	India Museum [P.].
l'', m'', n''. ♂ ad. et juv. sk.	Chinkiang Canal, Yangtse R., winter.	Lieut. Davies [P.].
o''. ♂ ad. sk.	Nankin, China, March (*R. Swinhoe*).	Seebohm Coll.
p''. ♂ ad. sk.	Ningpo, China, Jan. (*R. S.*).	Seebohm Coll.
q'', r''. ♀ ad. et ♂ juv. sk.	Shanghai, China, Feb., March (*R. S.*).	Seebohm Coll.

s''. ♀ ad. sk.	Shanghai, China, Feb.	F. W. Styan, Esq. [P.].
t'', *u''*. ♂ ♀ ad. sk.	Yokohama, Japan, March (*H. Pryer*).	Seebohm Coll.
v''. ♀ ad. st.	N. America.	Hudson's Bay Co. [P.].
w''. Skeleton.	Russia.	Purchased.
x''. Sternum.	England.	John Ray, Esq. [P.].
y''. Sternum (with shoulder-girdle).	Europe.	M. Lefebvre [C.].
z'', *a*³. Sterna.		

63. LOPHODYTES.

Type.

Lophodytes, *Rchnb. Av. Syst. Nat.* p. ix (1852) ..... L. cucullatus.

Range. Confined to North America.

1. Lophodytes cucullatus.

Anas cristatus, *Catesby, Carol.* i. p. 94, t. 94 (1754).
Merganser virginianus cristatus, *Briss. Orn.* vi. p. 258 (1760).
Round-crested Duck, *Edw. Glean.* pl. 360 (1762).
Mergus cucullatus, *Linn. S. N.* i. p. 207, n. 1 (1766); *Gm. S. N.* i. 2, p. 544, n. 1 (1788); *Lath. Ind. Orn.* ii. p. 830, n. 5 (1790); *Wils. Am. Orn.* viii. p. 79, pl. 69. f. 1 (1814); *Vieill. N. D.* xiv. p. 220 (1817); *Dum. Dict. Sc. Nat.* xx. p. 296 (1821); *Sabine, Frankl. Journ.* App. p. 702 (1823); *Bp. Obs. Wils.* n. 251 (1825); *Ranz. El. di Zool.* iii. pt. ix. p. 147 (1826); *Bp. Ann. Lyc. N. Y.* ii. p. 397, n. 349 (1826); *id. Specch. Comp.* p. 74, n. 263 (1827); *id. Syn.* p. 397 (1828); *Less. Man. d'Orn.* ii. p. 420 (1828); *id. Tr. d'Orn.* p. 635 (1831); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 263 (1831); *Selby, Trans. N. H. Soc. of Northumb.* i. p. 292 (Yarmouth) (1831); *id. Edinb. Journ. of Nat. & Geogr. Sc.* iii. p. 238 (1831), *cf. A. Newton, Tr. Norf. & Norw. Nat. Soc.* ii. p. 408 (1878); *Bp. Isis*, 1832, p. 1191, n. 349; *Selby, Illustr. of Brit. Orn.* ii. p. 383 (1834); *Nutt. Man.* ii. p. 465 (1834); *Jen. Man.* p. 249 (1835); *Aud. Orn. Biogr.* iii. p. 246, pl. 233 (1835); *Eyt. Rarer Brit. B.* p. 75 (1836); *id. Cat. Brit. B.* p. 57 (1836); *Gould, B. Eur.* v. pl. 386 (1837); *Eyt. Mon. Anat.* p. 177 (1838); *Blyth, Natur.* iii. p. 413 (1838 (Norfolk); *Aud. Syn.* p. 299 (1839); *Temm. Man. d'Orn.* iv. p. 557 (1840); *K. & B. Wirbelth. Eur.* pp. lxxxviii, 232 (1840); *Aud. B. Am.* vi. p. 402, pl. 413 (1843); *Schleg. Rev. Crit.* p. cxxi (1844); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* iii. p. 147 (1844); *id. Gen. B.* iii. p. 629, n. 3 (1844); *De Kay, N. Y. Zool.* ii. p. 320 (1844); *Giraud, B. Long Isl.* p. 341 (1844); *Rchnb. Syn. Av.*, Natatores, t. 73. ff. 88, 89 (1845); *Degl. Orn. Eur.* ii. p. 483 (1849); *Württemb. Naumannia*, 1852, Heft ii. p. 54 (Cuba); *Licht. Nomencl. Av.* p. 103 (1854); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Cab. & Gundl. J. f. O.* 1857, p. 231 (Cuba); *Cass. U.S. Expl. Exped.* p. 345 (1858); *Murray, Edinb. N. Phil. Journ.* 1859, p. 231; *Sclat. P. Z. S.* 1859, p. 237 (Vancouver); *Brewer, Pr. Bost. Soc. N.H.* vii. p. 308 (1860) (Cuba); *Gundl. J. f. O.* 1862, p. 93 (Cuba); *G. R. Gr. List Brit. B.* p. 209 (1863); *Degl. & Gerbe, Orn. Eur.* ii. p. 572 (1867); *Coues, Key N. Am. B.* p. 296 (1872); *id. Check-list*, n. 523 (1873); *id. B. N.-West*, p. 584 (1874); *Sclat. & Salv. P. Z. S.* 1876, p. 409; *Coues, Check-list N.*

Am. B. 2nd ed. p. 177, n. 745 (1882); *B. O. U. List Brit. B.* p. 137 (1883); *Saund. Yarrell's Brit. B.* iv. p. 509 (1884–85); *Seeb. Hist. Brit. B.* iii. p. 633, pl. 67 (egg) (1885); *Cory, List B. West Ind.* p. 31 (1885); *Tristr. Cat. Coll. B.* p. 46 (1889); *Hartert, Kat. Vogelsamml.* p. 234 (1891).

Harle huppé de Virginie, *D'Aubent. Pl. Enl.* 935 (♂), 936 (♀).

Harle couronné, *Buff. Hist. Nat. Ois.* viii. p. 280 (1783).

Hooded Merganser, *Penn. Arct. Zool.* ii. p. 538, n. 467 (1785); *Lath. Syn.* iii. 2, p. 426, n. 4, t. ci. (1785).

? Brown Merganser, *Penn. Arct. Zool.* ii. *Suppl.* p. 74 (1787) (Hudson's Bay).

? Mergus fuscus, *Lath. Ind. Orn.* ii. p. 832, n. 9 (1790) (*ex Pennant*); *Vieill. N. D.* xiv. p. 224 (1817) (= cucullatus ?); *Dum. Dict. Sc. Nat.* xx. p. 297 (1821).

Merganser cucullatus, *Bonn. Enc. Méth.* i. p. 103, pl. 27. f. 2 (1790); *Steph. Gen. Zool.* xii. 2, p. 168 (1824); *Bp. Comp. List*, p. 59 (1838); *id. Cat. Met. Ucc. Eur.* p. 74 (1842); *Macgill. Man. Orn.* ii. p. 196 (1842).

Merganser fuscus, *Steph. Gen. Zool.* xii. 2, p. 170 (1824).

Lophodytes cucullatus, *Rchnb. Av. Syst. Nat.* p. ix (1852); *Bp. Compt. Rend.* xliii. p. 652, n. 171 (1856); *Baird, B. N. Am.* p. 816 (1858); *id. Cat. N. Am. B.* n. 613 (1859); *Sclat. P. Z. S.* 1859, p. 369 (Jalapa); *Coop. & Suckl. N. H. Wash. Terr.* p. 265 (1860); *Hayd. Rep.* 1862, p. 176; *Verr. Pr. Ess. Inst.* iii. p. 159 (1862); *Gould, B. Gr. Brit.* v. pl. 36 (pt. x., 1866); *Dress. Ibis*, 1866, p. 144 (Texas); *Gundl. Repert. Fisico-Nat. Cuba*, i. p. 391 (1866); *Schleg. Mus. P.-B.*, Anseres, p. 5 (1866); *Lawr. Ann. Lyc. N. Y.* viii. (1866) p. 298 (1867); *Coues, Pr. Ess. Inst.* v. p. 201 (1868); *Dall & Bann. Tr. Chic. Acad.* i. p. 202 (1869) (Alaska); *Eyt. Syn. Anat.* p. 137 (1869); *Stev. U.S. Geol. Surv. Terr.* p. 466 (1870); *G. R. Gr. Hand-list*, iii. p. 91, n. 10733 (1871); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Allen, Bull. Mus. C. Z.* iii. p. 183 (1872); *Snow, B. Kans.* p. 12 (1873); *Gundl. J. f. O.* 1875, p. 385 (Cuba); *Sclat. P. Z. S.* 1880, p. 531; *Ridgw. Nom. N. Am. B.* n. 638 (1881); *B., B., & R. Water-B. N. Am.* ii. p. 121 (1884); *Nehrl. J. f. O.* 1885, p. 148 (Illinois); *Matschie & Ziemer, J. f. O.* 1885, p. 192; *A. O. U. Check-list N. Am. B.* p. 114, n. 131 (1886); *Nelson, Nat. Hist. Coll. in Alaska*, p. 67 (1887); *Ridgw. Man. N. Am. B.* p. 89, n. 131 (1887); *Cory, Auk*, 1888, p. 69; *id. B. W. Ind.* p. 270 (1889); *Hatch, B. of Minnes.* p. 36 (1892).

Mergus (Lophodytes) cucullatus, *Coues, Key N. Am. B.* 2nd ed. p. 718, n. 745 (1884).

Adult male. Head and upper part of the neck black; top of the head ornamented with a compressed semicircular crest, the posterior half of which is white, edged with black; forehead dark fuliginous brown; back, rump, and upper tail-coverts brown-black; scapulars deep black; lower part of the neck in front, breast, and abdomen white; on the sides of the breast two crescentic black bands, descending from the upper part of the back; sides reddish brown, narrowly waved with blackish brown; under tail-coverts freckled with white, reddish, and brown; wing-coverts blackish round the edge of the wing, the central ones grey, the greater black with the tips white; quills brown, the secondaries white on the outer web, forming a white speculum on the wing, which is crossed by two

black bands, formed by the black base of the secondaries showing through and by the base of the greater coverts; tertials very broad and long, black, with a mesial longitudinal white band; under wing-coverts brown, edged with white; axillaries white; tail brown: "bill black; irides bright yellow; legs and feet yellowish brown" (*B., B., & R.*). Total length about 17·5 inches, wing 7·75, tail 4, culmen 1·6, tarsus 1·4.

Female. Smaller than the male; head, neck, upper breast, sides, flanks, and upper parts brown, lighter on the sides of the head, neck, and breast; the crest reddish brown, lighter at the tip; throat whitish brown; the brown feathers of the breast, flanks, and upper parts have lighter edges; breast and abdomen pure white; longer under tail-coverts brown, freckled with paler; upper wing-coverts greyish brown, the greater ones black, tipped with white, forming a white band across the wing; quills brown, secondaries edged with white on the outer web, forming an imperfect wing-speculum; tertials black, with a mesial white band along the middle; under wing-coverts, axillaries, and tail as in the male: "maxilla black, edged with orange; mandible orange; iris hazel; feet dusky" (*B., B., & R.*).

Young in first plumage. Similar to the adult female, but are somewhat browner and have the crest rudimentary or wanting, the sides and posterior part of the crissum more distinctly brown.

Young in down. "Above deep hair-brown, darkest on the back and rump; posterior border of the arm-wing, a small spot on each side of the back (nearly concealed by the closed wing), and a larger one on each side of the rump white; lower half of the head (from about on a line with the eye) brownish buff, paler on the chin and throat; jugulum light dingy brownish; remaining lower parts dingy white, the sides brown, like the upper part" (*B., B., & R.*).

Hab. North America in general, north to Alaska and (accidentally) Greenland, south to Mexico and Cuba; casual in the British Isles.

a. ♂ imm. st.	N. America.	Hudson's Bay Co. [P.].
b, c. ♂ ♀ ad. st.	N. America.	Hardwicke Bequest.
d. ♂ juv. st.	N. America.	Purchased.
e, f. ♂ ♀ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
g–k. ♂ ♀ ad et juv. sk.	49th Parallel.	N. America Boundary Comm. [P.].
l, m. ♂ ad. et juv. sk.	Washington, D.C. (*C. Drexler*).	Salvin-Godman Coll.
n, o. ♀ juv. sk.	Big Moose Lake, New York, July, Oct. (*A. K. Fisher*).	Salvin-Godman Coll.
p–x. ♂ ♀ ad. et ♂ juv. sk.	Tarpon Springs, Florida, Nov., Dec. (*W. E. D. Scott*).	Salvin-Godman Coll.
y–a'. ♂ ♀ ad. et imm. sk.	Corpus Christi, Texas, Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
b'. ♀ ad. sk.	Jalapa, Mexico (*de Oca*).	Salvin-Godman Coll.
c'. Pull. sk.	No locality.	Gould Coll.
d'. ♀ ad. st.	[S. America.]	Old Coll.
e'. ♂ ad. st.	Yorkshire, England.	Purchased.

64. MERGANSER.

Merganser, *Briss. Orn.* vi. p. 230 (1760); *Schaeffer, Mus. Ornith.* p. 66 (1789); *Leach, Syst. Cat. M. & B. Brit. Mus.* p. 36 (1816); *Steph. Gen. Zool.* xii. 2, p. 160 (1824) ..... Type.

Mergus, *Selby* (*nec Linn.*), *Cat. Gen. & Subgen. B.* p. 47 (1840) ..... M. castor.

Prister, *Heine, Nom. Mus. Hein. Orn.* p. 350 (1890). M. castor. M. brasilianus.

Range. Palæarctic Region, Northern India, Nearctic Region, S.E. Brazil, and the Aucklands.

Key to the Species.

a. Lower parts not barred across, except on the flanks in some species.

a'. Flanks not dark lead-grey, almost uniform, and under tail-coverts not dusky grey edged with white.

a''. Lower part of the neck, like the lower surface, white.

*a*³. Flanks entirely white: males with the head black glossed with green; females with the head rufous-brown, and throat conspicuously white.

*a*⁴. No conspicuous black band across the wing at the base of the greater wing-coverts.

*a*⁵. Larger; culmen 2·20–2·40 inches: feathers of the hind part of the head very full, but not very long and not forming a prominent crest; head of the females of a deep and bright chestnut ..... *castor*, p. 472.

*b*⁵. Smaller; culmen 1·90–2·10: feathers of the hind part of the head rather thin and long, and forming decidedly a prominent crest; head of the female of a dull and pale rufous, and with the anterior part of the crown tinged with greyish ..... *comatus*, p. 475.

*b*⁴. A conspicuous black band across the wing, at the base of the greater wing-coverts ..... *americanus*, p. 477.

*b*³. Feathers of the sides and flanks with conspicuous crescentic bands; head above brown-rufous, sides of the head and throat paler; occipital crest very long (*male immature?*) ..... *squamatus*, p. 478.

b''. A distinct white collar round the neck defines the black of the upper part from the reddish breast, which is streaked with dusky; flanks waved with black and whitish zigzag lines; head and upper part of the neck black with a green gloss (*males*); throat of the female not white but rufescent ..... *serrator*, p. 479.

b'. Flanks dark lead-grey, almost uniform; under tail-coverts dusky grey, edged with white; head brown-rufous, apparently in both sexes. *australis*, p. 484.

b. Lower parts barred with white and blackish.... *brasilianus*, p. 485.

1. Merganser castor.

The Goosander.

Merganser, *Briss. Orn.* vi. p. 231, pl. xxii. (♂) (1760).

Merganser cinereus, *Briss. op. cit.* p 255, pl. xxv. (♀) (1760).

Mergus rubricapilla, *Brünn. Orn. Bor.* p. 22, n. 93 (1764).

Mergus merganser, *Linn. S. N.* i. p. 208, n. 2 (♂) (1766); *Gm. S. N.* i. 2, p. 544, n. 2 (1788); *Lath. Ind. Orn.* ii. p. 828, n. 1 (1790); *Pall. Zoogr. Rosso-As.* ii. p. 286 (1811) (Kurile I.); *Temm. Man. d'Orn.* p. 575 (1815); *Vieill. N. D.* xiv. p. 219 (1817); *Temm. Man.* 2nd ed. ii. p. 881 (1820); *Dum. Dict. Sc. Nat.* xx. p. 292 (1821); *Faber, Prodr. d. isl. Orn.* p. 64 (1822); *Flem. Phil. of Zool.* ii. p. 261 (1822); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 85 (1823); *Brehm, Lehrb. eur. Vög.* p. 852 (1823); *Yarr. Tr. Linn. Soc.* xv. p. 391, pl. xv. f. *g* (sternum), ff. *a*, *e*, *h* (trachea) (1827); *Bp. Specch. Comp.* p. 74, n. 236 (1827); *Flem. Brit. An.* p. 128 (1828); *Less. Man. d'Orn.* ii. p. 420 (1828); *Brehm, Isis*, 1830, p. 999, n. 1 (Iceland); *id. Handb. Vög. Deutschl.* p. 943 (1831); *Less. Tr. d'Orn.* p. 635 (1831); *Savi, Orn. Tosc.* iii. p. 122 (1831); *Jen. Man.* p. 249 (1835); *Gould, B. of Eur.* v. pl. 384 (1837); *Eyt. Mon. Anat.* p. 173 (1838); *Temm. Man.* iv. p. 556 (1840) (Japan); *Strickl. Ann. & Mag. N. H.* viii. p. 545 (1842); *Selys-L. Faun. Belg.* i. p. 147 (1842); *Schleg. Rev. Crit.* p. cxxi (1844); *Naum. Vög. Deutschl.* xii. p. 356, t. 326 (1844); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List. B. Brit. Mus.* iii. p. 147 (part.) (1844); *Rchnb. Syn. Av.*, Natatores, t. 73. ff. 94, 95, 884 (1845); *Less. Descr. Mamm. et Ois.* p. 252 (1847); *Degl. Orn. Eur.* ii. p. 478 (1849); *Temm. & Schleg. Faun. Jap., Aves*, p. 129 (1850) (Japan); *Hansmann, Naumannia*, 1852, Heft ii. p. 124 (Duberow, breeding); *Midd. Reis. Sibir.* ii. 2, p. 238 (1853); *Tobias, J. f. O.* 1853, p. 218 (Oberlausitz); *Püssl. ibid.* pp. 242, 323 (Lapland); *Licht. Nomencl. Av.* p. 103 (1854); *Vanger. J. f. O.* 1855, p. 345 (Mark); *Müll. J. f. O.* 1856, p. 232 (Provence); *Küttl. Denkw.* ii. p. 248 (1858); *Powys, Ibis*, 1860, p. 354 (Ionian I.); *Schrenck, Vög. Amur-L.* p. 485 (1860); *Swinh. Ibis*, 1861, p. 344 (N. China); *id. P. Z. S.* 1863, p. 323; *Radde, Reis. S. O.-Sibir.* ii. p. 378 (1863); *Salvad. J. f. O.* 1865, p. 326; *Schleg. Mus. P.-B.*, Anseres, p. 2 (part.) (1866); *Deyl. & Gerbe, Orn. Eur.* ii. p. 569 (1867); *Holtz, J. f. O.* 1868, p. 127; *S. Müll. J. f. O.* 1869, p. 349 (Färoe); *Eyt. Syn. Anat.* p. 133 (1869); *Przew. Voy.* n. 212 (1867–69); *id. Putesch Ussur.* n. 212 (1870); *Elwes & Buckl. Ibis*, 1870, p. 340 (Bosphorus); *Homey. J. f. O.* 1870, p. 434; *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 435 (1871); *Saund. Ibis*, 1871, p. 397 (Spain); *Sundev. Meth. nat. Av. disp. Tent.* p. 150 (1872); *Gieb. Thes. Orn.* ii. p. 570 (part.) (1875); *Irby, Orn. Str. of Gibralt.* p. 206 (Marocco); *Dress. B. of Eur.* vi. p. 685, pl. 452 (1875); *Palmén, J. f. O.* 1876, p. 62 (Finland); *Tacz. Faun. Vost. Sibir.* p. 72 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 48 (1877); *David & Oust. Ois. Chine*, p. 510 (1877); *Pleske, J. f. O.* 1878, p. 94; *Gigl. Icon. Avif. Ital.* fasc. iii. tav. 369 (1879); *Sclat. P. Z. S.* 1880, p. 531; *Buchan. Pr. Phys. Soc. Edinb.* v. pp. 189–193 (Scotland) (1880); *Brandt, J. f. O.* 1880, p. 250; *Bolau, J. f. O.* 1881,

p. 65 (part.); *Rchnw. Orn. Centralbl.* 1882, p. 2; *id. Vög. zool. Gärt.* p. 41 (1882); *Salv. Cat. B. Strickl. Coll.* p. 541 (1882); *B. O. U. List Brit. B.* p. 136 (1883); *Sclat. List Vert. An.* 8th ed. p. 442 (1883); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 344 (1883) (Kamtschatka); *Dabrowsky, MT. orn. Ver. Wien*, 1884, pp. 84, 85 (Bosnia); *Radde, Ornis Caucas.* p. 465 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 488 (1884-85); *Sceb. Hist. Brit. B.* iii. p. 625, pl. 67 (egg) (1885); *Salvad. El. Ucc. Ital.* p. 269 (1886); *Dörries, J. f. O.* 1888, p. 95 (E. Siberia); *Hartwig, J. f. O.* 1889, p. 151 (North Cape); *Tristr. Cat. Coll. B.* p. 46 (part.) (1889); *Seeb. B. Japan. Emp.* p. 257 (1890); *Rchnw. J. f. O.* 1890, p. 85; *Floericke, J. f. O.* 1891, p. 198 (Schlesia, breeding); *Hartert, Kat. VogelsammL* p. 234 (1891); *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 311 (1891); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 513 (part.), pl. 274 (1893); *Wallengr. J. f. O.* 1893, p. 168 (Sweden).

Mergus castor, *Linn. S. N.* i. p. 209, n. 4 (♀) (1766); *Gm. S. N.* i. 2, p. 545 β (1788); *Lath. Ind. Orn.* ii. p. 829, n. 2 (1790); *Brehm, Isis*, 1830, p. 999, n. 2; *id. Handb. Vög. Deutschl.* p. 944 (1831); *G. R. Gr. Gen. B.* iii. p. 629, n. 1 (syn. emend.) (1844); *Blyth, Cat. B. Mus. A. S. B.* p. 308, n. 1798 (part.) (1849); *Gould, B. Great Brit.* v. pl. 34 (pt. x., 1866); *Swinh. P. Z. S.* 1871, p. 416 (China); *G. R. Gr. Hand-list*, iii. p. 91, n. 10728 (syn. emend.) (1871); *Swinh. Ibis*, 1875, p. 456 (Hakodadi); *Blakist. & Pryer, Ibis*, 1878, p. 215 (Japan); *iid. Tr. As. Soc. Jap.* viii. p. 187 (1880), x. p. 101 (1882).

Mergus gulo, *Scop. Ann.* i. *Hist. Nat.* p. 69, n. 88 (1769).

? Mergus æthiops, *Scop. Ann.* i. *Hist. Nat.* p. 70, n. 90 (1769).

Mergus asiaticus, *S. G. Gmel. Reise d. Russl.* ii. p. 188, t. 20 (1774); *Gm. S. N.* i. 2, p. 548, n. 6 β (1787).

Mergo-Oca, *Gerini, Stor. degli Ucc.* v. tt. 508, 512 (♂ ad.), 510 (♀) (1776).

Goosander, *Penn. Brit. Zool.* n. 260, t. 92. f. 1 (1776); *id. Arct. Zool.* ii. p. 537, n. 465 (1785); *Lath. Syn.* iii. 2, p. 418, n. 1 (1785).

Dun Diver or Sperling-Fowl, *Penn. Brit. Zool.* ii. p. 557, t. 92. f. 2 (♀) (1776); *Lath. Syn.* iii. 2, p. 420, n. 2 (1785).

Harle, *D'Aubent. Pl. Enl.* 951 (♂), 952 (♀); *Buff. Hist. Nat. Ois.* viii. p. 267, pl. 33 (1781).

Mergus rubricapillus, *Gm. S. N.* i. 2, p. 545 γ (1788).

Merganser raucedula, *Schaeff. Mus. Orn.* p. 66, n. 210, t. 43 (1789).

Merganser castor, *Schaeff. Mus. Orn.* p. 67, n. 212 (1789); *Bonn. Enc. Méth.* i. p. 103, n. 4 (♀) (1790); *Bp. Comp. List*, p. 59, n. 433 (1838); *id. Cat. Met. Ucc. Eur.* p. 75 (1842); *Macgill. Man. Orn.* ii. p. 194 (1842); *id. Hist. Brit. B.* v. p. 207 (1852); *Bp. Compt. Rend.* xliii. p. 652, n. 166 (1856); *Loche, Cat. M. et O. Algér.* p. 146 (1858).

Merganser æthiops, *Schaeff. Mus. Orn.* p. 67, n. 213 (1789).

Merganser rancedula (*lege* raucedula), *Bonn. Enc. Méth.* i. p. 101, pl. 26. f. 4 (♂) (1790) (*ex Gesner, Av.* 133, 134).

? Merganser leucomelanus, *Schrank, Faun. Boic.* i. p. 238 (1798).

Merganser raii, *Leach, Cat. M. & B. Brit. Mus.* p. 36 (1816); *Steph. Gen. Zool.* xii. 2, p. 161, pl. 53 (♂) (1824).

Merganser gulo, *Leach, l. c.* (1816).

Mergus (Merganser) castor, part., *K. & B. Wirbelth. Eur.* pp. lxxxviii, 231 (1840).

Mergus orientalis, *Gould, P. Z. S.* 1845, p. 1, part. (Amoy); *Hein. & Rchnw. Nom. Mus. Hein. Orn.* p. 350 (Japan) (1890).

Merganser aldrovandi, *Rchnb. Av. Syst. Nat.* p. ix, tab. vii. (1852) (*ex Ray*).

Mergus major, *C. F. Dubois, Pl. Col. Ois. Belg.* iii. pl. et p. 268 (1860).
Mergus pusillus, *Eyt. Syn. Anat.* p. 138 (1869) (Amoy) (=orientalis, *Gould*).
Merganser merganser, *Stejn. Orn. Expl. Kamtsch.* p. 176 (1885); *Ridgw. Man. N. Am. B.* p. 88 (1887).

Adult male. Head and upper part of the neck black, glossed with bottle-green; the occipital feathers elongated, but not forming a distinct crest, except when erected; lower part of neck and mantle white; back and scapulars glossy black; lower part of the back, rump, upper tail-coverts, and tail ashy, the basal tail-coverts paler, the longest with the shafts blackish, and the centre darker; underparts white, on the breast and abdomen, especially in freshly killed specimens, delicate pale salmon-colour; lower flanks at the base of the tail and outer under tail-coverts finely vermiculated with grey; upper wing-coverts, median and inner secondaries white, the latter edged with black on the outer web; outer scapulars white; primaries, primary-coverts, and outer secondaries brown-black, but the secondaries white at the tip; marginal under wing-coverts brown, edged with white, the remainder, with the axillaries, white: bill deep vermilion-red, the ridge of the upper mandible and the tooth blackish; iris deep reddish brown; legs vermilion-red. Total length about 28 inches, wing 11·25, tail 5·25, culmen 2·45, tarsus 1·95.

Female. Head and upper neck deep rusty, duller on the crown and anterior part of head; throat conspicuously white; the rusty colour of the neck sharply defined below; feathers of the crown and nape much elongated, forming a crest when erected; lower neck grey, with the edges of the feathers whitish; upper parts generally, including the inner secondaries, scapulars, and wing-coverts, ashy grey, many of the feathers with dark shafts; primaries, primary-coverts, and outer secondaries black, with a greyish tinge; median secondaries white, with only the concealed base of the feathers blackish grey; outer greater wing-coverts blackish, median white with a dark grey band at the tip, the inner ones grey like the back; marginal under wing-coverts dark grey edged with white, the greater ones uniform grey, the remainder like the axillaries white; tail grey like the back; breast, abdomen, and under tail-coverts white, the marginal ones of the latter with a V-shaped grey mark, and the longest freckled with grey; flanks grey, with the edges of the feathers whitish; soft parts as in the male, but not so brightly coloured. Total length about 23 inches, wing 10·5, tail 5, culmen 1·9, tarsus 1·75.

Young in first plumage closely resemble adult females, but have shorter crests, and brown instead of grey markings on the breast and flanks; *males* may be distinguished by paler feathers on the median wing-coverts and outer scapulars, and darker feathers on the inner scapulars (*Seebohm*).

Males in first nuptial dress have more grey on the shoulders than adults.

Males in moulting plumage closely resemble adult females, but have traces of a black ring round the neck, are darker on the back and shoulders, and show the whitish wing of the immature bird (*Seebohm*).

Young in down. Similar to that of *M. serrator*, but perhaps not so dark on the upper parts.

Hab. Northern parts of the Palæarctic region, from Western Europe to Kamtschatka; in winter extends from Southern Europe and the basin of the Mediterranean to China and Japan.

a. ♂ ad. sk.	Greenland.	Hume Coll.
b. ♀ ad. sk.	Orkneys (*J. E. Harting*).	H. J. Elwes, Esq. [P.].
c, *d*. Pull. st.	Gt. Britain.	Purchased.
e. ♂ ad. st.	Gt. Britain.	Montagu Coll.
f. Juv. st.	England.	Purchased.
g. ♂ ad. st.	Sutherland.	Mrs. Flower [P.].
h, *i*. ♂ ad. et ♂ juv. sk.	Lynn Harbour.	Salvin-Godman Coll.
k. ♀ ad. sk.	Yarmouth, Norfolk, Dec.	Seebohm Coll.
l, *m*, *n*. ♂ ♀ ad. st.	Norfolk.	Purchased.
o. ♀ ad. st.	Norfolk.	J. Sabine, Esq. [P.].
p, *q*. ♂ imm. et ♀ ad. sk.	Wells, Norfolk, Jan., Nov.	Capt. H. W. Feilden [P.].
r. ♀ ad. st.	Rendlesham Park, Suffolk.	Rev. W. Kirby [P.].
s. ♀ ad. sk.	R. Dulas, Wales, Jan.	Editor of 'Land and Water' [P.].
t. ♀ ad. st.	Gloucestershire.	Montagu Coll.
u. ♀ ad. sk.	Omsk, Aug.	Dr. O. Finsch [P.].
v, *w*. ♀ ad. et ♂ juv. sk.	Yen-e-say, Siberia, lat. 62½°, June (*H. S.*).	Seebohm Coll.
x. ♀ ad. sk.	China.	J. R. Reeves.
y. ♀ ad. sk.	Kiu-kiang, China, Dec.	F. W. Styan, Esq. [P.].
z. ♀ ad. sk.	Chinkiang Canal, Yangtse R., winter.	Lieut. Davies [P.].
a', *b'*, *c'*. ♂ ♀ ad. sk.	Shanghai, China, March, Dec. (*R. Swinhoe*).	Seebohm Coll.
d'. ♀ ad. sk.	Shanghai, China, Dec.	F. W. Styan, Esq. [P.].
e'. ♀ ad. sk.	Amoy, China (*R. Swinhoe*).	Seebohm Coll.
f', *g'*. ♂ ad. et ♂ juv. sk.	Corea.	C. W. Campbell, Esq. [P.].
h'. ♀ ad. sk.	Hakodadi, Japan, April (*Blakiston*).	Seebohm Coll.
i', *k'*. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
l'. ♀ ad. sk.	Nagasaki, Japan, Dec.	F. Ringer, Esq. [P.].
m'. ♂ ad. sk.		Seebohm Coll.
n'. Skeleton.		
o'. Skeleton.		Purchased.
p', *q'*. Skulls.		

2. Merganser comatus.

Mergus serrator, *Hodgs.* (*nec Linn.*) *Gray's Zool. Misc.* p. 86, nn. 626, 627 (1844); *Sharpe* (lapsu), *Trans. Linn. Soc.* (2) *Zool.* v. p. 92 (Bala-Morgab) (1889).

Mergus orientalis, *Gould*, *P. Z. S.* 1845, p. 1 (part.) *; *G. R. Gr. Cat. Hodgs. Coll. B. M.* p. 147 (Nepal) (1846); *id. Gen. B.* App. p. 28 (1849); *Bp. Compt. Rend.* xliii. p. 652, n. 168 (1856); *G. R. Gr. Cat. Hodgs. Coll. B. M.* 2nd ed. p. 77 (1863).

Mergus castor, *Blyth*, *Cat. B. Mus. A. S. B.* p. 308, n. 1798 (part., specim. A, B, D) (1849); *Jerd.* (*nec Linn.*) *B. of Ind.* iii. p. 817 (1864) (N. India); *G. R. Gr. Hand-list*, iii. p. 91, n. 10728 (part.) (1871); *Hume & Anders. Lahore to Yark.* p. 297 (Indus) (1873); *Hume, Str. Feath.* i. p. 423 (1873) (Sumbhulpoore, Centr. Prov. of India); *Parker, Str. Feath.* ii. p. 336 (Barrakur) (1874); *Ball, ibid.* p. 439 (Chota Nagpur) (1874); *Scully, Str. Feath.* iv. p. 202 (Kashgar) (1876); *Hume, ibid.* p. 496 (Mekran Coast) (1876); *Hume, Str. Feath.* vii. p. 149 (Ajmere) (1878); *Ball, ibid.* p. 233 (India) (1878); *Bidd. Str. Feath.* ix. p. 365 (Gilgit) (1880); *id. Ibis*, 1881, p. 101 (Gilgit).

Mergus merganser, *Dyb. & Parrex* (*nec Linn.*), *J. f. O.* 1868, p. 359 (Dauria) (?); *Tacz. J. f. O.* 1873, p. 110; *Severtz. Turkest. Jevotn.* p. 70 (1873); *Dresser, Ibis*, 1876, p. 421 (Turkestan); *Przew. Mongolia*, ii. pp. 160, 170, n. 276 (1876); *id. in Rowl. Orn. Misc.* iii. p. 107 (Mongolia) (1878); *Hume, Str. Feath.* viii. p. 115, n. 972 (India) (1879); *Scully, Str. Feath.* viii. pp. 364, 368 (Nepal) (1879); *Hume & Marsh. Game B. of Ind.* iii. p. 299, pl. 40 (1882); *McLeod, Str. Feath.* x. p. 168 (Tangrote Ferry) (1887); *Hume, Str. Feath.* xi. p. 347 (Assam) (1888); *Cripps, ibid.* p. 348 (Dehing river); *Sharpe, Sec. Yark. Miss., Ares*, p. 133 (1891); *Oust. Ann. Sc. Nat., Zool.* (7) xii. p. 318, n. 56 (1892); *id. Nouv. Arch. Mus.* (3) vi. p. 103 (1894).

Similar to *M. castor*, but somewhat smaller, the feathers of the crest thinner, narrower, and longer; the bill usually shorter; the *male* has the black edges of the tertials broader, the lower back and rump paler grey and usually much freckled with white: "bill deep red, almost vermilion in some, a cinnabar or deep blood-red in others; the nail and a stripe along the culmen, from the nail to the forehead, black; lower mandible wholly orange; irides deep red; legs and feet bright vermilion" (*Hume*). Total length 25 to 27 inches, wing 10·95–11·8, tail from vent 4·80–5·9, culmen 1·90–2·10, tarsus 1·68–1·80.

The *female* differs from that of *M. castor* in having the head lighter rufous chestnut, with a distinct greyish wash on the upper part; size somewhat smaller than that of the male.

Hab. Central Asia, with the Himalayas, where it breeds.

a. ♀ ad. sk.	Tanktze, Afghanistan, Sept. (*F. Stoliczka*).	India Museum [P.].
b. ♂ juv. sk.	Bala Morghab, Afghanistan, Jan. (*Aitchison*).	Afghan Delimitation Comm. [P.].
c. ♂ ad. st.	India.	Old Coll.†

* Under the name of *M. orientalis*, Gould described a female from Amoy, which I do not think different from *M. castor*; at the same time he said, "I believe a male of this bird is in the British Museum." The latter bird is still in the Museum, and no doubt it belongs to the Central Asiatic and Indian form.

† This is the male bird mentioned by Gould in his description of *M. orientalis*, P. Z. S. 1845, p. 2; the female from Amoy, belonging to *M. castor*, is to be taken as the type of *M. orientalis*.

d. ♀ ad. sk.	India.	Purchased.
e. ♀ ad. sk.	Indus River, Sept. (*J. Biddulph*).	Tweeddale Coll.
f–k. ♂ ♀ ad. sk.	Nepal (*Hodgson*).	India Museum [P.].
l. ♀ ad. sk.	Native Sikhim, Jan. (*L. Mandelli*.)	Hume Coll. (Type of the species.)
m–y. ♂ ♀ ad. et ♂ juv. sk.	Native Sikhim, Nov.–Dec., April (*L. Mandelli*).	Hume Coll.
z. ♂ ad. sk.	Sikhim (*L. Mandelli*).	Hume Coll. (Type of the species.)
a'–h'. ♂ ♀ ad. et ♂ juv. sk.	Sikhim, Feb. (*L. Mandelli*).	Hume Coll.
i'. ♀ ad. sk.	Sikhim, Dec.	J. Biddulph, Esq. [P.].
k'. ♂ ad. sk.	Near Darjeeling.	Hume Coll.
l'. ♀ ad. sk.	Suddya, Assam, Feb.	Hume Coll.
m'. ♂ ad. sk.	Bengal (*Hardwicke*).	India Museum [P.].
n'. ♂ ad. sk.	Dinapur.	Capt. S. Pinwill [P.].
o'–v'. ♂ ♀ ad. sk.	Mahanadi, Raipur Dist., Jan.	Hume Coll.
w'. ♂ ad. sk.	Kuku-noor (*Prjevalsky*).	Seebohm Coll.
x'. Sternum.		

3. Merganser americanus.

Mergus merganser, *Wils.* (*nec Linn.*) *Am. Orn.* viii. p. 68, pl. 68 (1814); *Vieill. N. D.* xiv. p. 219 (part.) (1817); *Dum. Dict. Sc. Nat.* xx. p. 292 (part.) (1821); *Bp. Obs. Wils.* n. 248 (1825); *id. Ann. Lyc. N. Y.* ii. p. 397, n. 347 (1826); *id. Specch. Comp.* p. 74, n. 260 (1827); *id. Syn.* p. 397 (1828); *Doughty, Cab. N. H.* i. p. 109, pl. 10 (1830); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 461 (1831); *Nutt. Man.* ii. p. 460 (1834); *Eyt. Mon. Anat.* p. 173 (part.) (1838) (America, Peru!); *Aud. Orn. Biogr.* iv. p. 261, pl. 331 (1838); *id. Syn.* p. 297 (1838); *id. B. Am.* vi. p. 387, pl. 411 (1843); *G. R. Gr. List B. Brit. Mus.* iii. p. 147 (*e, f*) (1844); *Giraud, B. Long Isl.* p. 339 (1844); *Wied, J. f. O.* 1859, p. 241 (N. America); *Schleg. Mus. P.-B.*, Anseres, p. 2 (part.) (1866); *Allen, Bull. Mus. C. Z.* iii. p. 183 (1872); *Coues, Key*, p. 296 (1872); *id. Check-list*, n. 521 (1873); *id. B. N.-West*, p. 583 (part.) (1874); *Gieb. Thes. Orn.* ii. p. 570 (part.) (1875); *Coues, Check-list*, 2nd ed. p. 117, n. 743 (1882); *id. Key N. Am. B.* 2nd ed. p. 716, n. 743 (1884); *Tristr. Cat. Coll. B.* p. 46, specim. *d* (1889); *Brandt, J. f. O.* 1891, p. 269 (Sitka).

Merganser castor, *Bp.* (*nec Linn.*) *Comp. List*, p. 59, n. 399 (1838).

Mergus americanus, *Cass. Pr. Acad. Philad.* 1853, p. 187; *id. U.S. Expl. Exped., Orn.* p. 345 (1858) (Oregon); *Baird, B. N. Am.* p. 813 (1858); *id. Cat. N. Am. B.* n. 611 (1859); *Coop. & Suckl. N. H. Wash. Terr.* p. 263 (1860); *Hayd. Rep.* 1862, p. 176; *Dress. Ibis*, 1866, p. 44 (Texas); *Lawr. Ann. Lyc. N. Y.* viii. 1866, p. 298 (1867); *Dall & Bann. Tr. Chic. Acad.* i. p. 301 (1869) (Alaska); *Stev. U.S. Geol. Surv. Terr.* p. 466 (1870); *Finsch, Abh. Brem. Ver.* iii. p. 71 (1872); *Dall, Pr. Cal. Acad.* v. (1873) p. 30 (Aleutians); *Snow, B. Kans.* p. 11 (1873).

Merganser castor, *a.* americanus, *Bp. Compt. Rend.* xliii. p. 652 (1856).

Mergus castor, part., *G. R. Gr. Hand-list*, iii. p. 91, n. 10728 (1871).

Mergus merganser americanus, *Ridgw. Pr. U.S. Nat. Mus.* iii. p. 205 (1880); *id. Nom. N. Am. B.* n. 636 (1881); *Bean, Pr. U.S. Nat.*

Mus. v. p. 167 (1882) (Kodiak); *Hartl. J. f. O.* 1883, p. 283 (Chilcoot, Alaska); *B., B., & R. Water-B. N. Am.* ii. p. 112 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 491 (1884–1885); *Seeb. Hist. Brit. B.* iii. p. 625 (1885); *Matsch. u. Ziemer, J. f. O.* 1885, p. 192; *Seeb. B. Japan. Emp.* p. 258 (1890).

Merganser americanus, *Stejn. Orn. Erpl. Kamtsch.* p. 177 (1885); *A. O. U. Check-list N. Am. B.* p. 113, n. 129 (1886); *Turner, Contr. Nat. Hist. of Alaska,* p. 130 (1886) (Unalaska); *Nelson, Nat. Hist. Coll. in Alaska,* p. 66 (1887); *Ridgw. Man. N. Am. B.* p. 89 (1887); *Hatch, B. of Minnes.* p. 34 (1892).

Similar to *M. merganser*, but the male is distinguished by having a black bar across the wing at the base of the greater coverts; as to the feathering at base of bill having quite distinct outline, as stated by Mr. Ridgway, I cannot find much difference.

Hab. Whole of North America, breeding south to northern border of United States; occasional in Bermudas.

a, b. ♂ ♀ ad. sk.	Columbia River.	J. K. Lord, Esq. [P.].
c. ♀ ad. sk.	British Columbia.	J. K. Lord, Esq. [P.].
d. ♀ ad. st.	Canada.	Hudson's Bay Co.
e. ♀ ad. sk.	49th Parallel, May.	N. America Boundary Comm. [P.].
f. ♀ ad. sk.	Vancouver Island, Nov.	J. K. Lord, Esq. [P.].
g. ♂ ad. sk.	Vancouver Island.	Salvin-Godman Coll.
h, i, k. ♀ ad. et ♂ juv. sk.	Lyon's Falls, New York, May, Nov. (*A. J. Dayan*).	Salvin-Godman Coll.
l, m. ♀ ad. et pull. sk.	4th Lake, Herkimer Co., New York, June (*C. H. Merriam*).	Salvin-Godman Coll.
n, o. Pull. sk.	Adirondacks, New York, June (*C. H. Merriam*).	Salvin-Godman Coll.
p. ♀ ad. sk.	Corpus Christi, Texas, Dec. (*F. B. Armstrong*).	Salvin-Godman Coll

4. Merganser squamatus.

Mergus squamatus, *Gould, P. Z. S.* 1864, p. 184 (China); *Eyt. Syn. Anat.* p. 136 (1869); *G. R. Gr. Hand-list,* iii. p. 91, n. 10730 (1871); *Swinh. P. Z. S.* 1871, p. 416; *David & Oust. Ois. Chine,* p. 511 (1877).

Male immature (type). Crown of the head, lengthened crest, and neck rusty brown; throat and upper part of the neck in front somewhat paler, but not white; upper surface grey, freckled with whitish on the rump and upper tail-coverts; some of the shorter scapulars have black edges; upper wing-coverts greyish, the greater ones and the secondaries black at the base, white on the apical half; the black bases of the greater coverts and of the secondaries show somewhat through, so that two black bands, nearly hidden, cross the wings; primaries black; breast, abdomen, and under tail-coverts white; sides of the breast and flanks with two or three narrow irregular crescentic bands of blackish brown on each feather; the distal crescentic band not on the very edge; a similar style of marking pervades the sides of the rump; tail-feathers greyish

brown, the central feathers freckled on the margin with greyish white. Total length about 23 inches, wing 9·7, tail 4·5, culmen 2·06, tarsus 1·77.

Hab. China (?).

The type of this species is still unique; there is no collector's name on the label, so that the locality is uncertain. Apparently the bird is a young male; it has no white patch on the throat, and in that respect resembles the young of *M. serrator*, while it approaches *M. castor* in the grey colour of the upper parts and the white of the lower. The squamate form of the markings on the flanks distinguishes this bird from the allied ones, but I have some doubts that it may be either an individual variety or an hybrid!

a. ♂ imm. sk. China (?). Gould Coll. (Type of species.)

5. Merganser serrator.

The Red-breasted Merganser.

Red-breasted Goosander, *Edw. Nat. Hist. of B.* i. p. 95, pl. 95 (♂) (1745) (Newfoundland).

Merganser cristatus, *Briss. Orn.* vi. p. 237, pl. xxiii. (♂) (1760); *Brünn. Orn. Bor.* p. 23, nn. 94, 95 (1764).

Merganser leucomelanus, *Briss. Orn.* vi. p. 250 (1760).

Merganser niger, *Briss. Orn.* vi. p. 251 (1760) (*ex Gesner*).

Mergus serratus, *Brünn. Orn. Bor.* p. 23, n. 96 (1764); *Gm. S. N.* i. 2, p. 546 β (1788).

Mergus serrator, *Linn. S. N.* i. p. 208, n. 3 (1766); *Gm. S. N.* i. 2, p. 546, n. 3 (1788); *Lath. Ind. Orn.* ii. p. 829, n. 4 (1790); *id. Trans. Linn. Soc.* iv. p. 121, t. xvi. ff. 1, 2 (trachea) (1798); *Illig. Prodr.* p. 278 (1811); *Pall. Zoogr. Rosso-As.* ii. p. 287 (1811); *Wils. Am. Orn.* viii. p. 81, pl. 69 (1814); *Temm. Man.* p. 579 (1815); *Vieill. N. D.* xiv. pp. 221, 223 (var.) (1817); *Temm. Man.* 2nd ed. ii. p. 884 (1820); *Dum. Dict. Sc. Nat.* xx. p. 294 (1821); *Flem. Phil. of Zool.* ii. p. 261 (1822); *Boie, Isis*, 1822, p. 564; *Licht. Verz. Doubl.* p. 85 (1823); *Sabine, Frankl. Journ.*, App. p. 702 (1823); *Brehm, Lehrb. eur. Vög.* p. 855 (1824); *Bp. Obs. Wils.* n. 249 (1825); *id. Ann. Lyc. N. Y.* ii. p. 397, n. 348 (1826); *id. Specch. Comp.* p. 74 (1827); *id. Syn.* p. 397, n. 348 (1828); *Flem. Brit. An.* p. 129 (1828); *Less. Man. d'Orn.* ii. p. 420 (1828); *Brehm, Isis*, 1830, p. 1000, n. 1; *id. Vög. Deutschl.* p. 945 (1831); *Less. Tr. d'Orn.* p. 635 (1831); *Savi, Orn. Tosc.* iii. p. 120 (1831); *Sw. & Rich. Faun. Bor.-Am.* ii. p. 462 (1831); *Nutt. Man.* ii. p. 463 (1834); *Jen. Man.* p. 249 (1835); *Gould, B. Eur.* v. pl. 385 (1837); *Eyt. Mon. Anat.* p. 175, pls. 16 (anatomy), 17 (skeleton and trachea) (1838); *Aud. Orn. Biogr.* v. p. 92, pl. 401 (1838); *id. Syn.* p. 298 (1839); *Temm. Man.* iv. p. 556 (1840) (Japan); *K. & B. Wirbelth. Eur.* pp. lxxxviii, 231 (1840); *Selys-L. Faun. Belg.* i. p. 147 (1842); *Macgill. Man.* ii. p. 194 (1842); *Schleg. Rev. Crit.* p. cxxi (1844); *Naum. Vög. Deutschl.* xii. p. 333, Taf. 325 (1844); *Hartl. Verz. Ges. Mus.* p. 121 (1844); *G. R. Gr. List B. Brit. Mus.* p. 147 (1844); *id. Gen. B.* iii. p. 629, n. 2 (1844); *DeKay, N. Y. Zool.* ii. p. 319 (1844); *Giraud, B. Long Isl.* p. 342 (1844); *Rchnb. Syn. Av.*, Natatores, t. 73. ff. 90–93 (1845); *Holb. Faun. Grænl.* p. 78 (1846) (Greenland); *Degl. Orn. Eur.* ii. p. 480 (1849); *Blyth, Cat. B. Mus. A. S. B.* p. 308, n. 1799 (1849); *Temm. & Schleg. Faun. Jap., Aves*, p. 129 (1850)

(Japan); *Rchnb. Av. Syst. Nat.* p. ix (1852); *Middend. Reis. Sibir.* ii. 2, p. 238 (1853) (Ochotsk); *Tobias, J. f. O.* 1853, p. 218; *Pässl. ibid.* pp. 242, 243, 322 (Lapland); *Schill. ibid.* p. 378; *Reinh. Vid. Medd.* 1853, p. 84 (Greenland); *id. J. f. O.* 1854, p. 442; *Licht. Nomencl. Av.* p. 103 (1854); *Bolle, J. f. O.* 1855, p. 315 (Spain); *Vanger. ibid.* p. 345; *Wiese, ibid.* p. 509; *Müll. J. f. O.* 1856, p. 232 (Provence); *Bp. Compt. Rend.* xliii. p. 652, n. 167 (1856); *Newb. P. R. R. Rep.* vi. p. 104 (1857); *Buvry, J. f. O.* 1857, p. 130 (Algeria); *Pässl. J. f. O.* 1857, p. 362; *Loche, Cat. M. et O. Algér.* p. 146 (1858); *Baird, B. N. Am.* p. 814 (1858); *id. Cat. N. Am. B.* n. 612 (1859); *Murr. Edinb. N. Phil. Journ.* 1859, p. 231; *Wied, J. f. O.* 1859, p. 242 (Indiana); *Preen, J. f. O.* 1859, p. 463; *Holland, J. f. O.* 1860, p. 305; *Schrenck, Voy. Amur-Lande*, p. 486 (1860) (Amoor-land); *Coop. & Suckl. N. H. Wash. Terr.* p. 264 (1860); *Powys, Ibis*, 1860, p. 354 (Ionian Isl.); *Reinh. Ibis*, 1861, p. 14 (Greenland); *Coues, Pr. Acad. Philad.* 1861, p. 241 (Salvador); *Hintz, J. f. O.* 1861, p. 308; *Gould, B. of Gr. Brit.* v. pl. 35 (pt. ii., 1862); *Blakist. Ibis*, 1862, p. 332 (Japan); *Ross, Canad. Natural.*, April 1862 (Mackenzie); *Verr. Pr. Ess. Inst.* iii. p. 153 (1862); *Boardm. Pr. Bost. Soc. N. H.* ix. p. 140 (1862); *Radde, Reis. S. O.-Sibir.* ii. p. 379 (1863); *Blakist. Ibis*, 1863, p. 150 (Hudson's Bay); *Swinh. Ibis*, 1863, p. 434 (Formosa); *id. P. Z. S.* 1863, p. 323 (China); *G. R. Gr. List Brit. B.* p. 209 (1863); *Hintz, J. f. O.* 1863, p. 430, 1864, p. 191; *Nordm. ibid.* p. 779 (Finland and Lapland); *Wright, Ibis*, 1864, p. 156; *Holtz, J. f. O.* 1865, p. 188 (nesting); *Hintz, ibid.* p. 242; *Salvad. ibid.* p. 326 (Sardinia); *Coues, Pr. Ac. Philad.* 1866, p. 37 (Fort Macon); *Droste, J. f. O.* 1866, p. 391 (Borkum); *Schleg. Mus. P.-B.*, Anseres, p. 3 (1866); *Lawr. Ann. Lyc. N. Y.* viii. 1866, p. 298 (Long Isl.) (1867); *Degl. & Gerbe, Orn. Eur.* ii. p. 570 (1867); *Coues, Pr. Bost. Soc. N. H.* xii. p. 125 (1868); *id. Pr. Ess. Inst.* v. p. 201 (1868); *Tristr. Ibis*, 1868, p. 328 (Palestine); *Holtz, J. f. O.* 1868, p. 127 (Gottland); *Dyb. & Parr. ibid.* p. 339 (Dauria); *Boie, J. f. O.* 1869, p. 97 (Lofoten and Vesteeraalen); *Goebel, ibid.* p. 320 (Archangel); *Droste, ibid.* p. 349 (Faroë), p. 394 (C. Finmark); *Collett, Norg. Fugle*, p. 68 (1868); *Droste, Vogelw. d. Nordins. Borkum*, p. 315 (1869); *Dall & Bann. Tr. Chic. Acad.* i. p. 201 (1869) (Alaska); *Eyt. Syn. Anat.* p. 134 (1869); *Przew. Voy. (or Putesch Ussur.)*, n. 213 (1870); *Turnb. B. E. Pa.* p. 37 (1869); *S. Müll. J. f. O.* 1869, p. 349 (Faroë); *Wyatt, Ibis*, 1870, p. 17 (Sinai); *Elw. & Buckl. ibid.* p. 341 (Turkey); *Homey. J. f. O.* 1870, p. 434 (E. Siberia); *Saund. Ibis*, 1871, p. 397 (S. Spain); *Meves, Œfv. K. Vet.-Ak. Förh.* 1871, p. 783; *David, N. Arch. du Mus., Bull.* vii. *Cat.* n. 434 (1871); *Swinh. P. Z. S.* 1871, p. 416 (China); *Coues, Pr. Acad. Philad.* 1871, p. 27; *Borggr. J. f. O.* 1871, pp. 217, 219 (N. Germany); *G. R. Gr. Hand-list*, iii. p. 91, n. 10729 (1871); *Heugl. Ibis*, 1872, p. 64 (Waigats I.); *id. J. f. O.* 1872, p. 123 (Waigats I.); *Homey. ibid.* p. 339; *Fritsch, ibid.* p. 372 (Bohemia); *Finsch, Abh. nat. Ver. Brem.* iii. p. 72 (1872) (Alexandrovsk); *Coues, Key N. Am. B.* p. 296 (1872); *id. Check-list*, n. 522 (1873); *Snow, B. Kans.* p. 11 (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 1351 (1873) (Egypt); *Dyb. J. f. O.* 1873, p. 111, 1874, p. 337; *Coues, B. N.-West*, p. 584 (1874); *Dall, Pr. Ac. Calif.* v. p. 276 (1874); *id. Extract Avif. Alcut. Isl. West Unal.* p. 7 (1874); *Dress. B. Eur.* vi. p. 693, pl. 453 (1874); *Swinh. Ibis*, 1875, p. 456 (Hakodadi); *Gieb. Thes. Orn.* ii. p. 570 (1875); *Palm. J. f. O.* 1876, p. 60

(Finland); *Tacz. Orn. Faun. Vost. Sibir.* p. 72 (1877); *id. Bull. Soc. Zool. Fr.* ii. p. 49 (1877) (E. Siberia); *David & Oust. Ois. Chine*, p. 511 (1877); *Prjev. in Rowley's Orn. Misc.* iii. p. 107 (1878) (Mongolia); *Blakist. & Pryer, Ibis*, 1878, p. 216 (Japan); *Hume & Marsh. Game B. of Ind.* iii. p. 305, pl. 20 (1882); *Hume, Str. Feath.* ix. pp. 268–272 (1880) (Kurrachee); *Sclat. P. Z. S.* 1880, p. 531; *Brandt, J. f. O.* 1880, p. 250; *Blakist. & Pryer, Tr. As. Soc. Jap.* viii. p. 187 (1880); *Ridgw. Nom. N. Am. B.* n. 637 (1881); *Rchnw. Orn. Centralbl.* 1882, p. 3; *id. Vög. zool. Gärt.* p. 41 (1882); *Salv. Cat. B. Strickl. Coll.* p. 541 (1882); *Blakist. & Pryer, Tr. As. Soc. Jap.* x. p. 101 (1882) (Japan and Kuriles); *Coues, Check-list*, 2nd ed. p. 117, n. 744 (1882); *B. O. U. List Brit. B.* p. 136 (1883); *Sclat. List Vert. An.* 8th ed. p. 442 (1883); *Booth, Rough Notes*, iii. pls. 82–84 (♂, ♀, and pullus) (1883); *Tacz. Bull. Soc. Zool. Fr.* viii. p. 345 (1883) (Kamtschatka); *Hartl. J. f. O.* 1883, p. 283 (Alaska); *Nels. Cruise 'Corwin,'* p. 103 (1883); *Tristr. Faun. & Flor. of Palest.* p. 118 (1884); *Radde, Ornis Caucas.* p. 465 (1884); *B., B., & R. Water-B. N. Am.* ii. p. 116 (1884); *Coues, Key N. Am. B.* 2nd ed. p. 717, n. 744 (1884); *Saund. Yarrell's Hist. Brit. B.* iv. p. 494 (1884–85); *Seeb. Hist. Brit. B.* iii. p. 629, pl. 67 (egg) (1885); *Nehrl. J. f. O.* 1885, p. 148 (Illinois); *Matsch. u. Ziemer, J. f. O.* 1885, p. 192; *Salvad. El. Ucc. Ital.* p. 270 (1887); *Shufeldt, Pr. U. S. Nat. Mus.* xi. pp. 216–230, ff. 1–7, 9 (osteology) (1888); *Hartw. J. f. O.* 1889, p. 151 (North Cape); *Tristr. Cat. Coll. B.* p. 46 (1889); *Seeb. B. Jap. Emp.* p. 258 (1890); *Rchnw. J. f. O.* 1890, p. 85; *Brandt, J. f. O.* 1891, p. 269 (Sitka); *Hartert, Kat. Vogelsamml.* p. 324 (1891); *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 311 (1891); *Lilford, Col. Fig. Brit. B.* pt. xxi. pl. — (1892); *Dubois, Faun. Vert. Belg., Ois.* ii. p. 518, pl. 275 (1893); *Wallengr. J. f. O.* 1893, p. 168 (Sweden); *Szielasko, Orn. Monatsb.* iii. pp. 53–58 (E. Prussia) (1895).

Mergus albellus, *Scop.* (*nec Linn.*) *Ann.* i. *Hist. Nat.* n. 89 (1769).

Merganser longiroster cristatus, *Gerini, Stor. degli Ucc.* v. t. DIX. (♂) (1776).

Red-breasted Merganser, *Penn. Brit. Zool.* ii. n. 261, t. 93 (1776); *id. Arct. Zool.* ii. p. 537, n. 466 (1785); *Lath. Syn.* iii. 2, p. 423, n. 3 (1785).

Harle huppé, *D'Aubent. Pl. Enl.* 207 (♂); *Buff. Hist. Nat. Ois.* viii. p. 273 (1781).

Harle à manteau noir, *Buff. Hist. Nat. Ois.* viii. p. 277 (1781).

Mergus leucomelas, *Gm. S. N.* i. 2, p. 546, δ (1788); *Brehm, Isis*, 1830, p. 1000, n. 2; *id. Vög. Deutschl.* p. 947 (1831); *id. Vogelf.* p. 390 (1855).

Mergus niger, *Gm. S. N.* i. 2, p. 546, γ (1788).

Merganser serrator, *Schäffer, Mus. Orn.* p. 66, n. 211, t. 44 (1789); *Bonn. Enc. Méth.* i. p. 102, pl. 27. f. 1 (♀) (1790); *Bp. Comp. List*, p. 59, n. 434 (Europe), n. 400 (N. America) (1838); *id. Cat. Met. Ucc. Eur.* p. 75 (1842); *Macgill. Hist. Brit. B.* v. p. 216 (1852); *Selys, Patria Bely.* i. p. 277 (1873); *Turner, Auk*, 1885, p. 158 (Alaska); *Stejn. Bull. U. S. Nat. Mus.* no. 29, p. 178 (1885) (Bering I.); *Turner, Contr. N. H. Alaska*, p. 131 (1886); *A. O. U. Check-list N. Am. B.* p. 114, n. 130 (1886); *Nelson, Contr. Nat. Hist. Coll. in Alaska*, p. 66 (1887); *Ridgw. Man. N. Am. B.* p. 89, n. 130 (1887); *Hatch, B. of Minnes.* p. 35 (1892); *Mackay, Auk*, 1894, p. 225.

Merganser niger, *Bonn. Enc. Méth.* i. p. 104 (1790).

Merganser cristatus, *Leach, Syst. Cat. M. & B. Br. Mus.* p. 36 (1816).
Merganser serrata, *Steph. Gen. Zool.* xii. 2, p. 165 (1824).
Mergus serratus, *Swinh. Ibis*, 1860, p. 62 (Amoy), 1861, p. 344 (N. China).
Mergus castor, *Butler* (*nec Linn.*), *Str. Feath.* v. p. 323 (Sindh) (1877).

Adult male. Head and upper part of the neck black, with a green gloss on the posterior half, the feathers of the crown and occiput elongated; middle of neck all round white, except a narrow line of black descending from the occiput to the upper part of the back, which, with the scapulars, is also black; a narrow portion of the upper back reddish brown marked with black; lower back, rump, and upper tail-coverts finely vermiculated with grey and black, longer upper tail-coverts brown, nearly uniform; upper part of the breast pale reddish brown, marked with blackish brown; on the sides of the breast a conspicuous patch of feathers black, with the central part white; sides and flanks grey, undulated with black; lower breast, abdomen, and under tail-coverts pale delicate reddish buff, which fades to white soon after death; marginal wing-coverts brown, with pale edgings, the central ones white; greater wing-coverts broadly white on the apical half, the basal half black; primaries, primary-coverts, and outer secondaries brown-black; inner secondaries white, with the base black; tertials white, edged with black on the outer web; on the white patch of the wing two oblique black bands formed by the bases of the greater coverts and of the secondaries; axillaries and under wing-coverts white, but the marginal ones of the latter more or less brown, edged with white; tail brown-grey, the outer feathers undulated with white and grey on the outer web: bill bright vermilion, with the unguis black, the ridge of the upper mandible dusky; iris bright red; feet bright vermilion. Total length about 22 inches, wing 10·1, tail 4, culmen 2·25, tarsus 1·6.

Female. Head and neck reddish brown, darkest on the crown; the occipital feathers elongated; back, scapulars, and small wing-coverts umber-brown, the edges of the feathers paler; a white patch or speculum on the wing, formed by the greater coverts and secondaries, which end broadly with white, but have the bases black, forming two black bands across the wing; rump and upper tail-coverts greyish brown; underparts white, the lower fore-neck mottled with reddish and pale brown; sides and flanks pale brown; primaries and primary-coverts brown-black, tertials greyish brown, edged with black on the outer edges; tail umber-brown; soft parts as in the male, but duller. Total length about 21 inches, wing 9·5, tail 3·1, culmen 2·15, tarsus 1·5.

Young male. Closely resembles the adult female, but it is larger, and has a shorter crest.

Males in first nuptial dress have the lower back brown, and the white round the neck streaked with brown.

Males in moulting dress closely resemble males in first plumage, but have the dark markings on the breast and flanks slaty grey instead of brown (*Seebohm*).

Young in down are dark brown on the upper parts, shading into reddish brown on the head, and into chestnut on the sides of the neck; a white patch on each wing, one on each side of the upper back, and one on each side of the rump; underparts pure white, and lores white, margined above and below with dark brown (*Seebohm*).

Hab. Northern portion of Northern Hemisphere, breeding northward, south in winter to the basin of the Mediterranean, the Black Sea, the Caspian, China and Japan in the Palæarctic Region, and to the United States in America.

a, *b*. Pull. st.	Orkneys.	Purchased.
c. Pull. sk.	Orkneys (*J. H. Dunn*).	Hargitt Coll.
d. ♂ ad. sk.	Loch Stenhouse, Orkneys, April (*H. J. E.*).	H. J. Elwes, Esq. [P.].
e. [♂ juv.] sk.	Stromness, Orkneys, April (*H. J. E.*).	H. J. Elwes, Esq. [P.].
f, *g*. ♂ ad. et juv. st.	Great Britain.	Old Coll.
h, *i*, *k*. Pull. st.	Great Britain.	Purchased.
l, *m*. ♂ imm. st.	North Uist.	T. Walker, Esq. [P.].
n–*u*. ♂ ♀ ad. et pull. st.	Colbost, Island of Skye, July.	Rev. H. A. Macpherson [P.].
v, *w*. ♂ ♀ ad. st.	Scotland.	Purchased.
x, *y*, *z*. ♂ juv. et pull. st.	England.	Purchased.
a'. ♂ juv. sk.	Beccles, Suffolk, Dec.	Seebohm Coll.
b', *e'*. ♂ ♀ ad. sk.	Poole Harbour, Dorset, Nov.	Baron A. von Hügel [P.].
d'. ♀ ad. sk.	Gloucestershire.	Montagu Coll.
e'. ♀ ad. sk.	Tangiers (*Olcese*).	Shelley Coll.
f'. ♀ ad. sk.	R. Kishon, Palestine.	Canon Tristram [P.].
g'. Imm. sk.	Jask, Persian Gulf.	W. D. Cumming, Esq. [P.].
h', *i'*. ♂ ♀ ad. sk.	Yen-e-say, E. Siberia, lat. 66½°, June (*H. S.*).	Seebohm Coll.
k'. Wings only.	Kurrachee (*Major Yerbury*).	Hume Coll.
l'. ♀ ad. sk.*	Manorah, Sind, Oct. (*Capt. Bishop*).	Hume Coll.
m', *n'*. ♀ ad. sk.	Fokien, China.	Gould Coll.
o', *p'*, *q'*. ♂ ♀ ad. sk.	Amoy, China, Feb., Dec. (*R. Swinhoe*).	Seebohm Coll.
r'. ♂ juv. sk.	Amoy, China (*R. Swinhoe*).	Salvin-Godman Coll.
s'. ♂ juv. sk.	Amoy, China, Dec.	H. Saunders, Esq. [P.].
t'. ♂ juv. sk.	Hamilton Island, Corea.	A. G. Wilday, Esq. [P.].
u', *v'*. ♂ ♀ ad. sk.	Hakodadi, Japan (*Blakiston*).	Seebohm Coll.
w', *x'*. ♂ ♀ ad. sk.	Yokohama, Japan (*H. Pryer*).	Seebohm Coll.
y', *z'*. ♂ ad. sk.	Nagasaki, Japan, March.	F. Ringer, Esq. [P.].
a'', *b''*. ♀ ad. et ♂ juv. sk.	Nagasaki, Japan, Feb. (*R. Bergman*).	Tweeddale Coll.

* Mentioned in 'Stray Feathers' as *M. castor*.

c''. ♂ juv. sk.	Okinawashima, Feb. (*P. A. Holst*).	Seebohm Coll.
d''. ♀ ad. sk.	Vancouver Island.	J. K. Lord, Esq. [P.].
e''. ♂ ad. sk.	Vancouver Island.	J. Wood, Esq. [P.].
f''. ♂ juv. sk.	Straits of San Juan de Fuca, March.	Dr. Lyall [P.].
g''. Pull. sk.	British Columbia.	Lord Russell [P.].
h''. ♂ ad. sk.	Fraser River, Brit. Columbia.	Old Coll.
i'', *k''*. ♂ imm. sk.	Kotzebue Sound.	Capt. Kellett [P.].
l''. ♀ ad. sk.	Stewart's Island, Alaska, June (*E. W. Nelson*).	Salvin-Godman Coll.
m''–u''. ♂ ad., ♂ imm., ♀ juv. et pull. sk.	St. Michael's, Alaska, June–Aug. (*E. W. N.*).	Salvin-Godman Coll.
v''. ♂ ad. sk.	Fort Simpson.	B. R. Ross, Esq. [P.].
w''–b^3. ♂ ♀ ad. st., ♂ ♀ ad. et imm. sk.	Canada.	Hudson Bay Co.
c^3 ♂ ad. sk.	Repulse Bay.	Dr. J. Rae [P.].
d^3. ♂ ad. sk.	Musquash Cove, New Brunswick, April (*H. E. Dresser*).	Salvin-Godman Coll.
e^3. ♀ juv. sk.	Massachusetts.	Salvin-Godman Coll.
f^3, *g*^{3}. ♂ ad. sk.	Nantucket, Massachusetts, Jan. (*H. W. Henshaw*).	Salvin-Godman Coll.
h^3. ♂ juv. sk.	Wood's Hole, Massachusetts, July (*C. H. Merriam*).	Salvin-Godman Coll.
i^3–*n*^{3}. ♀ ad. et ♂ juv. sk.	Corpus Christi, Texas, Jan., Oct., Dec. (*F. B. Armstrong*).	Salvin-Godman Coll.
o^3. ♂ ad. sk.	Greenland.	Tweeddale Coll.
p^3, *q*^{3}. ♂ ♀ ad. sk.	Greenland.	Hume Coll.
r^3. Juv. sk.	S. Greenland, Sept.	Seebohm Coll.
s^3. Skeleton.	England.	
t^3. Sternum.	England.	
u^3. Sternum.	England.	J. Ray, Esq. [P.].
v^3, *w*^{3}. Sterna with shoulder-girdle.	Europe.	Purchased.
x^3. Sternum with shoulder-girdle.		
y^3, *z*^{3}. Sterna.		Yarrell Coll.
a^4. Trachea with bulla ossea.		

6. Merganser australis.

Mergus australis, *Hombr. & Jacq. Ann. Sc. Nat.* 1841, p. 320 (Aucklands); *iid. Voy. Pôle Sud, Ois.* pl. 31. f. 2 (1846); *G. R. Gr. Gen. B.* App. p. 28 (1849); *Rchnb. Syn. Av.*, Natatores, t. 87. f. 2554 (1850) (*ex H. & J.*); *Pucher. & Jacq. Voy. Pôle Sud, Zool.* iii. p. 152 (Aucklands) (1853); *Hartl. J. f. O.* 1854, p. 167; *Bp. Compt. Rend.* xliii. p. 652, n. 169 (1856); *G. R. Gr. Ibis*, 1862, p. 242; *Finsch, J. f. O.* 1870, p. 358; *G. R. Gr. Hand-list*, iii. p. 91, n. 10731 (1871); *Finsch, J. f. O.* 1872, p. 188; *Hutt. Trans. & Pr. N. Z. Inst.* v. p. 238 (1873); *Finsch, J. f. O.* 1874, p. 203;

Gieb. Thes. Orn. ii. p. 569 (1875); *v. Hügel, Ibis*, 1875, p. 392; *Buller, Man. N. Z. Birds*, p. 73 (1882); *id. Hist. B. New Zeal.* 2nd ed. ii. p. 279 (1888); *Buller, Trans. N. Z. Inst.* xxv. 1892, p. 88 (young in down) (1893).

Nesonetta aucklandica, part., *G. R. Gr. Gen. B.* iii. p. 627 (1844); *id. List B. Brit. Mus.* iii. p. 191 (part.) (1844).

Type. Head and neck brown, with a rufous tinge on the throat and lower neck; feathers of the occiput rather long and narrow; upper parts, breast, and flanks dark grey; feathers of the lower parts dark grey, those of the breast with whitish edges, which become broader on the abdomen and under tail-coverts; a white speculum on the wings, formed by a subapical white band on the greater wing-coverts and by the median part of the outer web of the inner secondaries; inner under wing-coverts and inner secondaries underneath edged with white; axillaries white; quills and tail-feathers blackish grey: "bill reddish brown, changing to black on the culmen and at the tips of both mandibles; legs and feet reddish brown" (*Buller*). Total length about 19 inches, wing 7·25, tail 3·5, culmen 2·45, tarsus 1·4 (*Paris Museum*).

Young in down. "It is covered with thick, long, and somewhat glossy down. The upper part and sides of the head, the hind neck, and the entire upper surface and sides of the body dark olive-brown; throat and fore neck, and spot under each eye, bright rufous, fading away towards the breast; under surface yellowish white; wings dark olive-brown, marked along the outer edge and longitudinally on the under surface with yellowish white. Bill very dark olive, shaded with brown on the ridge, the terminal shield on both mandibles reddish brown, with a polished surface; legs and feet dull olive-brown, paler on the toes, the interdigital webs darker, and the claws yellowish brown." (*Buller.*)

A specimen in the Cambridge Museum and a second in the British Museum, considered by Buller to be male and female, have both a conspicuous crest and crescentic grey and white markings on the breast: these markings I take to be distinctive of the adult bird.

Two specimens in the Tring Museum, marked male and female, have no crescentic markings on the breast, shorter crest, and the middle of the lower breast and abdomen conspicuously white, with very few dusky mottlings; these I take to be *immature birds*.

Hab. Auckland.

a. Ad. sk.	Auckland I., Dec.	Baron v. Hügel [P.].

7. Merganser brasilianus.

Mergus octosetaceus, *Vieill. N. D.* xiv. p. 222 (1817) (Brazil); *Dum. Dict. Sc. Nat.* xx. p. 296 (1821); *Ranz. Elem. di Zool.* iii. pt. ix. p. 151 (note) (1826); *Sclat. & Salv. P. Z. S.* 1876, p. 409; *Sclat. P. Z. S.* 1880, p. 532; *B., B., & R. Water-B. N. Am.* ii. p. 120 (note) (1884); *Schäff, J. f. O.* 1888, pp. 6, 7.

Mergus octosetælus, *Vieill. Enc. Méth.* i. p. 351, pl. 236. f. 3 (1823).

Mergus fuscus, *Licht.* (*nec Lath.*) *Verz. Doubl.* p. 85, n. 901 (♂)

nec 902 (♀) (1823) (San Paulo, Brazil); *G. R. Gr. Gen. B.* App. p. 28 (1849).

Mergus brasilianus, *Vieill. Gal. des Ois.* ii. p. 209, pl. 283 (1825)*; *Less. Tr. d'Orn.* p. 635, n. 3 (1831); *id. Compl. de Buff., Ois.* ix. p. 537 (1837); *id. op. cit.* 2nd ed. p. 722 (1838); *Eyt. Mon. Anat.* p. 176 (1838); *Bp. Compt. Rend.* xliii. p. 652, n. 170 (1856); *Eyt. Syn. Anat.* p. 135 (1869).

Mergus octosetalus, *Boie, Isis*, 1826, p. 980.

Mergus brasiliensis, *G. R. Gr. Gen. B.* iii. p. 624, n. 4 (1844); *id. op. cit.* App. p. 28 (1849); *Licht. Nomencl. Av.* p. 103 (1854); *Burm. Syst. Uebers.* iii. p. 441 (1856); *Schleg. Mus. P.-B.*, Anseres, p. 6 (1866); *Pelz. Orn. Bras.* p. 322 (Rio Itararé), pp. 460, lix (1870); *G. R. Gr. Hand-list*, iii. p. 90, n. 10732 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 131 (1873); *Berl. J. f. O.* 1874, p. 281 (Santa Catharina); *Gieb. Thes. Orn.* ii. p. 569 (1875).

Mergus lophotes, *Cuv. Mus. Paris*; *Pucher. Rev. et Mag. de Zool.* 1850, p. 551 (= M. octosetælus = M. brasilianus); *Hartl. J. f. O.* 1855, p. 420.

Mergus octosetosus (*errore* ?), *Bp. Compt. Rend.* xliii. p. 652, *in syn.* M. brasiliani (1856); *Schlegel, l. c.*; *G. R. Gr. Hand-list, l. c.*; *Giebel, l. c.*

Prister brasilianus, *Heine & Rchnw. Nom. Mus. Hein. Orn.* p. 350 (1890).

Adult male. Head and upper part of the neck glossy black, with a green lustre; anterior lower part of the neck, sides of the breast, and flanks grey, minutely dotted and waved with whitish; upper back, rump, upper tail-coverts, and scapulars glossy brown-black; breast, abdomen, and under tail-coverts barred across with white and brown-black, the bars on the under tail-coverts narrower; wings brown-black, the middle wing-coverts lighter or greyish towards the tip; speculum on the wing white, formed by the apical half of the greater wing-coverts and of the secondaries, crossed by two black bands, one anteriorly formed by the base of the greater wing-coverts and the other by the black base of the secondaries showing through; under wing-coverts blackish brown, edged with white; tail black: "bill and feet greenish black; irides brown" (*Burmeister*). Total length about 19 inches, wing 7·2, tail 4, culmen 1·82, tarsus 1·5.

Female. Differs from the male in having the crown and the long occipital feathers of a chocolate-brown.

Young. "Upper surface dull blackish brown, mixed with some scattered pure brown-black feathers; crown, sides of the head, and crest (formed of long, narrow, occipital feathers) blackish, with a slight green gloss; also on the upper part of the neck there are a few black glossy-green feathers; the shorter secondaries and their coverts on the outer web white, except on the base, which is black; therefore on the wing there are a broader and a narrower white speculum, separated from each other by a black line, formed by the

* Vieillot himself gave up the name *M. octosetaceus* as misleading, the bird having many more than eight feathers on the occiput.

black base of the quills; smaller upper wing-coverts (except the smallest) tinged with whitish grey on the outer web; throat and the whole of the fore neck to the breast blackish, the feathers with broadish whitish tips, so that the throat in particular appears very light; remainder of the under surface white, all the feathers crossed with blackish bands, almost evanescent on the middle of the breast and abdomen; under wing-coverts blackish, edged with white; under tail-coverts blackish, finely dotted with white-grey; tail-feathers partly black-brown; feet and tarsus brown; upper mandible blackish; lower mandible paler." (*Berlepsch.*)

Hab. South-eastern Brazil.

a.	Ad. st.		Zool. Soc.
b.	♀ ad. sk.	Ytarare, Brazil, Aug. (*Natterer*).	Salvin-Godman Coll.

APPENDIX.

Containing references to doubtful species of *Anseres*, which have not yet been identified.

1. Anas alexandrina.

Anas collaribus albis, *Forsk. Descr. An.* p. vi, n. 8 (1775) (=Sau Sarai).
Anas, *Forsk. op. cit.* p. 3, n. 8 (1775).
Anas alexandrina, *Gm. S. N.* i. 2, p. 542, n. 121 (1788) (*ex Forskål, Descr. An.* p. 3, n. 8): *Lath. Ind. Orn.* ii. p. 877, n. 114 (1790); *Vieill. N. D.* v. p. 138 (1816); *Dum. Dict. Sc. Nat.* vi. p. 394 (1817); *Steph. Gen. Zool.* xii. 2, p. 112 (1824).
Anas sau sarai, *Bonn. Enc. Méth.* i. p. 153 (1791).

"Rostrum totum nigrum; collum cinereum, semicirculis albis; abdomen albidum, immaculatum; uropygium subtus nigrum; pedes cinereo-flavi, membrana natatoria fusca." (*Forskål.*)
Locus. Alexandriæ.
Perhaps the male of *Chaulelasmus streperus.*

2. Anas arabica.

Anas grisea, *Forsk. Descr. An.* p. vi, n. 7 (1775) (=Scar chir).
Anas, *Forsk. op. cit.* p. 3, n. 7 (1775).
Anas arabica, *Gm. S. N.* i. 2, p. 542, n. 120 (1788) (*ex Forsk. ll. cc.*); *Lath. Ind. Orn.* ii. p. 877, n. 113 (1790); *Vieill. N. D.* v. p. 150 (1816); *Dum. Dict. Sc. Nat.* vi. p. 394 (1817); *Steph. Gen. Zool.* xii. 2, p. 111 (1824).
Anas scar chir, *Bonn. Enc. Méth.* i. p. 149 (1790).

Hab. Arabia.
Perhaps the female of *Chaulelasmus streperus.*

3. Anas balbul.

Anas nigro-viridi-rhombea, *Forsk. Descr. An.* p. vi, n. 12 (1775) (=Balbul).
Anas, *Forsk. op. cit.* p. 4, n. 12 (1775).
Anas balbul, *Gm. S. N.* i. 2, p. 543, n. 124 (1788) (*ex Forsk. ll. cc.*); *Bonn. Enc. Méth.* i. p. 149 (1790); *Dum. Dict. Sc. Nat.* vi. p. 393 (1817).
Anas crecca, var. δ, *Lath. Ind. Orn.* ii. p. 874 (1790).
Anas balboul, *Vieill. N. D.* v. p. 168 (1816).

Hab. Egypt.
Possibly *Querquedula circia.*

4. Anas bisinuata.

Anas bisinuata, *Herm. Obs. Zool.* p. 143 (1804).

5. Anas borealis.

Gulaund Duck, *Penn. Arct. Zool.* ii. p. 572 (1785) (Iceland); *Lath. Syn.* iii. 2, p. 465, n. 25 (1785).
Anas borealis, *Gm. S. N.* i. 2, p. 512, n. 69 (Iceland) (1788); *Lath. Ind. Orn.* ii. p. 843, n. 30 (1790); *Steph. Gen. Zool.* xii. 2, p. 106 (1824).
Anser borealis, *Bonn. Enc. Méth.* i. p. 122 (1790); *Vieill. N. D.* xxiii. p. 338 (1818).

Probably the same as *Somateria mollissima*.

6. Anas cana.

Anas cana, *Lazár* (*nec Gm.*), *Erdelyi Muz. Egylét Évkönyvei*, i. pt. 2, p. 73 (1860); *id. Verhandl. u. Mitth. d. siebenb. Ver. f. Naturw.* 10 Jahrg. p. 246 (1859); *Danf. & Harvie Brown, Ibis*, 1875, p. 430 (=A. marmorata?).

"Size of *A. querquedula*, but more plumpy and the head broader head, neck, and upper parts of a grey colour (like that of the Wild Dove); the breast, abdomen, and the under surface of the wings snow-white; *speculum green*; bill and feet black."

Hab. Coromandel and Transylvania (!).

Messrs. Danford and Harvie Brown (*l. c.*) think that the bird described by Lazár may have been *Anas marmorata*, but the green speculum is against such identification.

7. Anas chinganensis.

Anas chinganensis, *Schperck*, '*Rossiya dailnayo vostoka*' (*Zapiski of the Imp. Russ. Geogr. Soc. St. Petersb.* vol. xiv. 1885) (*cf. Ibis*, 1887, p. 254) (descr. nulla).

8. Anas dominicana.

Canard Dominiquain du Cap de Bonne Espérance, *Sonner. Voy. aux Ind.* ii. p. 221 (1782).
Dominican Duck, *Lath. Syn.* iii. 2, p. 525, n. 70 (1785).
Anas dominicana, *Gm. S. N.* i. 2, p. 536, n. 109 (1788); *Lath. Ind. Orn.* ii. p. 859, n. 66 (1790); *Bonn. Enc. Méth.* i. p. 133 (1790); *Vieill. N. D.* v. p. 112 (1816); *Dum. Dict. Sc. Nat.* vi. p. 379 (1817); *Steph. Gen. Zool.* xii. 2, p. 109 (1824).

"Size of the Wild Duck; beak black; the face and throat are white; from the beak, passing through the eye, is a black streak, ending in an angle behind; the hind part of the head, the neck, and the breast black; the back and lesser wing-coverts are of a deep ashy grey, barred with two bands of very pale grey; the belly and vent are pale grey; the legs are black.

"Inhabits the Cape of Good Hope." (*Stephens.*)

9. Anas fusca.

Anas fusca (Teal), *Ellman* (*nec Linn.*), *Zool.* 1861, p. 7471; *G. R. Gr. Ibis*, 1862, p. 241 (note).

Hab. New Zealand.

10. Anas fuscescens.

Brown Duck, *Penn. Arct. Zool.* ii. p. 565, n. 499 (Newfoundland) (1785); *Lath. Syn.* iii. 2, p. 486, n. 39 (1785).

Anas fuscescens, *Gm. S. N.* i. 2, p. 534, n. 104 (1788); *Lath. Ind. Orn.* ii. p. 849, n. 46 (1790); *Vieill. N. D.* v. p. 109 (1816); *Dum. Dict. Sc. Nat.* vi. p. 385 (1817); *Steph. Gen. Zool.* xii. 2, p. 106 (1824); *Merr. in Ersch u. Grub. Encycl.* sect. i. vol. xxxv. p. 37 (1841); *Gieb. Thes. Orn.* i. p. 352 (1872).

"Length 16 inches; beak large, stout at its base, bluish, with its tip black; the nostrils are placed near the end (!); the head and neck are very pale brown; the lower part of the last, and the breast the same; the feathers edged with ferruginous; the wings ashy grey; the speculum blue, tipped with white; the tail and legs dusky.

"Inhabits Newfoundland." (*Stephens.*)

11. Anas hina.

Anas chinensis, *Osbeck*, *Voy.* ii. p. 33.

Hina Teal, *Lath. Syn.* iii. 2, p. 558, n. 98 (China) (1785).

Anas hina, *Gm. S. N.* i. 2, p. 523, n. 93 (1788) (*ex Latham*); *Lath. Ind. Orn.* ii. p. 876, n. 109 (1790); *Bonn. Enc. Méth.* i. p. 158 (1791); *Vieill. N. D.* v. p. 120 (1816); *Dum. Dict. Sc. Nat.* vi. p. 395 (1817).

Querquedula hina, *Steph. Gen. Zool.* xii. 2, p. 152 (1824) (a doubtful species); *G. R. Gr. Gen. B.* iii. p. 616, n. 11 (1845); *Bp. Compt. Rend.* xliii. p. 650, n. 95 ? (1856).

A Chinese Duck, which has been identified by Dumont with *Aix galericulata*, and by Gray with *Nettion crecca*!

12. Anas juncea.

Anas juncea seu graminea, *Frisch*, *Vög.* t. (xvi.) 173 (♂) (1743–1763).

Anas juncea, *Bechst. Gem. Nat. Deutschl.* iii. p. 669 (1791); *id. Orn. Taschenb.* ii. p. 446 (1803); *id. Vög. Deutschl.* ii. 1, p. 415, iv. 2, p. 1158 (1809).

Perhaps an imaginary bird, or an accidental variet of *Nettion crecca*: the entire head and neck green; breast chestnut, body grey; wings as in *A. boscas*.

13. Anas lurida.

Anas lurida, *S. G. Gmel. Reise Russl.* i. p. 70 (1770), ii. p. 182, t. 16 (1774); *Gm. S. N.* i. 2, p. 531, n. 101 (1788); *Bonn. Enc. Méth.* i. p. 156 (1791); *Dum. Dict. Sc. Nat.* vi. p. 378 (1817).

Anas gmelini, *Lath. Ind. Orn.* ii. p. 876, n. 111 (1790) (=lurida, *S. G. Gm.*); *id. Syn. Suppl.* ii. p. 356, n. 29 (1801); *Vieill. N. D.* v. p. 171 (1816).
Fuligula gmelini, *Steph. Gen. Zool.* xii. 2, p. 209 (1824).
Anas lucida, "*Gm.*" (errore), *Gieb. Thes. Orn.* i. p. 358, *in syn.* A. nyrocæ (1872).

"Anas nigra, capite spadiceo, pectore lineis rubris transversis; *Crecca* maior.
"*Hab.* in Mari Caspio et reliqua Russia australi."
Perhaps the same as *Nyroca ferina* or *N. africana*.

14. Anas mediterranea.

Anas mediterranea (Mountain Teal), *Ellman, Zoolog.* 1861, p. 7471 (New Zealand ?); *G. R. Gr. Ibis*, 1862, p. 241 (note).

15. Anas montana.

Berggans, *Kolbe, Vorg.* 2, p. 139.
Mountain Goose, *Lath. Syn.* iii. 2, p. 458, n. 20 (1785).
Anas montana, *Gm. S. N.* i. 2, p. 510, n. 65 (1788); *Lath. Ind. Orn.* ii. p. 841, p. 25 (1790).
Anser montanus, *Bonn. Enc. Méth.* i. p. 122, n. 32 (1790); *Vieill. N. D.* xxiii. p. 343 (1818); *Dumont, Dict. Sc. Nat.* xxxv. p. 467 (1825).
Anser montana, *Steph. Gen. Zool.* xii. 2, p. 37 (1824).
Chenalopex montanus, *G. R. Gr. Gen. B.* iii. p. 605, n. 3 (1845).

"Size larger than the *Tame Goose*. The wing-feathers and those of the head of a bright red, shining green.
"*Inhabits* the Cape of Good Hope, where it keeps mostly on the hills, and feeds on grass and herbs." (*Latham* ex *Kolbe.*)
Doubtfully identified by Bonaparte (Compt. Rend. xliii. p. 649) with *Chenalopex ægyptiacus*, but more likely = *Casarca cana*; and if so, the original description quite wrong.

16. Anas nilotica.

Anas nilotica, *Hasselq. Iter*, p. 365, n. 36 (1757): *id. Reise* (*ed. Linn.*), p. 319, n. 36 (1762); *Gm. S. N.* i. 2, p. 508, n. 62 (1788); *Lath. Ind. Orn.* ii. p. 846, n. 38 (1790); *Bonn. Enc. Méth.* i. p. 133 (1790); *Vieill. N. D.* v. p. 130 (1716); *Dum. Dict. Sc. Nat.* vi, p. 349 (1817).
Nilotic Duck, *Lath. Syn.* iii. 2, p. 488, n. 42 (1785).
Cairina nilotica, *Steph. Gen. Zool.* xii. 2, p. 81 (1824).

Perhaps the same as *Chenalopex ægyptiacus*.

17. Anas sirsair.

Anas viridi-rhombea, *Forsk. Descr. Anim.* p. vi, n. 11 (1775) (=Sirsair).
Anas, *Forsk. op. cit.* p. 3, n. 11 (1775).

Anas sirsair, *Gm. S. N.* i. 2, p. 542, n. 123 (1788) (*ex Forsk. ll. cc.*); *Lath. Ind. Orn.* ii. p. 877, n. 116 (1790); *Bonn. Enc. Méth.* i. p. 149 (1790); *Vieill. N. D.* v. p. 155 (1816); *Dum. Dict. Sc. Nat.* vi. p. 394 (1817); *Steph. Gen. Zool.* xii. 2, p. 111 (1824); ? *Tsch. J. f. O.* 1856, p. 150 (Rurik).

Hab. Arabia.
Most probably the female of *Nettion crecca*.

18. Anas sp.

Canard à crête rouge, *Cook, 2nd Voy.* (New Zealand); *cf. Vieill. N. D.* v. p. 111 (1816).

19. Anas sp.

Teal (with red on the wing), *Travers, Tr. New Zeal. Inst.* i. p. 178 (Chatham Islands) (1869); 2nd ed. p. 125 (1875).
Querquedula sp., *Finsch, J. f. O.* 1870, p. 357.
Anas sp.?, *Hutton, Ibis*, 1872, p. 247 (Chatham Islands); *Finsch, J. f. O.* 1874, p. 223.

20. Anas torrida.

Branta torrida, *Scop. Ann.* i. *Hist. Nat.* p. 68, n. 66 (1769).
Anas torrida, *Gm. S. N.* i. 2, p. 516, n. 75 (1788); *Lath. Ind. Orn.* ii. p. 845, n. 33 (1790); *Bonn. Enc. Méth.* i. p. 153 (1791); *Bechst. Orn. Taschenb.* ii. p. 454, n. 37 (1803); *Dum. Dict. Sc. Nat.* vi. p. 380 (1817).

According to Bechstein, probably a hybrid between a Common Duck and *Cairina moschata*.

21. Anas xalcuani.

Anas xalcuani, *Vieill. N. D.* v. p. 165 (Mexico) (1816) (*ex Hernandez*).

22. Chloëphaga patagonica.

Chloëphaga patagonica, *Moseley, Notes of a Natural. on the Challenger*, p. 551 (Elizabeth Island) (1879).

The name used by Moseley had never been published before, and I do not know to which species it refers; perhaps to *C. magellanica*, or to *Tachyeres cinereus*.

23. Dafila caribæa.

Dafila caribæa, *Württemb. Naumannia*, 1852, Heft 2, p. 56 (Haiti); *Hartl. ibid.*

"Wesentlich verschieden von *D. americana* und *urophasianus*; grösser wie beide" (*Württemberg*). "Sehr wahrscheinlich neu" (*Hartlaub*).

24. Mergus cæruleus.

White-faced Duck, *Lath. Syn.* iii. 2, p. 504, n. 50 A (1785).
Blue Merganser, *Penn. Arct. Zool.* ii. *Suppl.* p. 74 (Hudson's Bay) (1787).
Mergus cæruleus, *Lath. Ind. Orn.* ii. p. 833, n. 10 (1790); *Dum. Dict. Sc. Nat.* xx. p. 297 (1821); *G. R. Gr. Gen. B.* iii. p. 629, n. 7 (?) (1844).
Merganser cæruleus, *Steph. Gen. Zool.* xii. 2, p. 171 (1824); *Bp. Compt. Rend.* xliii. p. 625 (?) (1856).

25. Mergus cristatus.

Mergus cristatus, *Pall.* (*nec Briss.*) *Zoogr. Rosso-As.* ii. p. 291 (1811) (Ins. Oceani Orientalis); *G. R. Gr. Gen. B.* iii. p. 629, n. 5 (?) (1844); *Brandt, J. f. O.* 1891, p. 269.
Mergus serrator *a.* pallasii, *Bp. Compt. Rend.* xliii. p. 652 (1856).

A species incompletely described, possibly identical with *Lophodytes cucullatus* (*cf.* Brandt, *l. c.*).

26. Mergus imperialis.

Anitra imperiale, *Cetti, Ucc. di Sard.* p. 314 (1776) (Sardinia).
Mergus imperialis, *Gm. S. N.* i. 2, p. 547, n. 4 (1788) (*ex Cetti*); *Lath. Ind. Orn.* ii. p. 829, n. 3 (1790); *Vieill. N. D.* xiv. p. 222 (1817) (=albellus ?); *Ranz. Elem. di Zool.* iii. pt. ix. p. 151 (note) (1826); *G. R. Gr. Gen. B.* iii. p. 629, n. 6 (?) (1844).
Merganser imperialis, *Bonn. Enc. Méth.* i. p. 106 (1790); *Steph. Gen. Zool.* xii. 2, p. 170 (1824); *Bp. Compt. Rend.* xliii. p. 652 (?) (1856).

The description of the bill given by Cetti, in my opinion, is that of a Goose, and most probably of *Anser ferus*.

27. Mergus nigricollis.

Mergus nigricollis, *Bechst. Orn. Taschenb.* ii. p. 403 (1803).

28. Œdemia sp.

Oidemia, sp. ?, *Boeck, MT. orn. Ver. Wien*, 1884, p. 167 (Extract, p. 25) (Cochabamba, Bolivia).

"Einförmig schwarz. Schnabel gelb, iris braun. Sehr selten" (*Boeck*).

29. Querquedula sp.

Querquedula, sp., *Boeck, MT. orn. Ver. Wien*, 1884, p. 167 (Extract, p. 25) (Cochabamba, Bolivia).

"Fast ähnliche Zeichnung wie *Dafila spinicauda*, aber ausgezeichnet durch zwei lebhaft rothe Flecken auf den Wangen, einen orange-gelben Schnabel, mit schwarzem First. Füsse roth" (*Boeck*).

30. Canard innominé.

Canard innominé, femelle, *Less. Descr. Mamm. et Ois.* p. 247 (1847).

Possibly the same as *Nettion flavirostre*.

Order XX. CRYPTURI.

Tinamous have a superficial resemblance to Partridges. Their bill, usually elongated, is as long as, or shorter than, the head; the culmen is nearly straight or slightly curved, flattened and covered at the base with a membrane or cere, which also envelops the nasal grooves; the nostrils are large, basal, or even open in the anterior half of the bill; the wings short, concave, rounded, and quinto-cubital; the tail short, constantly pendent, and generally hidden by the upper tail-coverts; tarsi moderate and shielded in front, or entirely covered with hexagonal scales; the toes are mostly four, but sometimes only three; when present, the hind toe is articulated higher than the anterior ones. Powder-down patches are present among the feathers, and these in some have aftershafts.

Tinamous have a small head and slender neck, clothed with very short feathers; the plumage is generally inconspicuous; some tint of brown, ranging from rufous to slaty, and often more or less closely barred with a darker shade of black, or even with pale buff, is the prevailing coloration.

The newly hatched chicks, nidifugous or *præcoces*, are covered with down, and more or less closely resemble the young of some of the *Ratitæ*.

The male takes on himself the duty of incubation.

The eggs are very remarkable, curiously unlike those of other birds, and the shell looks like highly burnished metal or glazed porcelain, presenting also various colours, which seem to be constant in the particular species, ranging from pale primrose to sage-green or light indigo, or from chocolate-brown to pinkish orange.

Tinamous are peculiar to the Neotropical Region, a few species only finding their way into Mexico, and none beyond. Some of them inhabit forests and others the more open country or the rocky mountains; but, irrespective of size (which in this group varies from that of a quail to that of a large common fowl), there is an unmistakable uniformity of appearance among them as a whole. (*A. Newton.*)

The affinities of the Tinamous have been much discussed.

Illiger in 1811 remarked the likeness of the Tinamou's bill to that of Rhea. On the other hand, L'Herminier in 1827 saw features in the Tinamou's sternum that in his judgment linked the birds to the *Rallidæ*. In 1830 Wagler (Nat. Syst. Amphib. &c. p. 127) placed the Tinamous in the same order as the Ostrich and its allies. In 1862 the close affinity of these groups was demonstrated by Prof. Parker's researches (Trans. Zool. Soc. v. pp. 205–232, 236-328, pls. xxxix.–xli.; Phil. Trans. 1866, pp. 174–178, pl. xv.). Shortly after this Prof. Huxley (P. Z. S. 1867, pp. 425, 426) was enabled to place the whole matter in a clear light, urging

that the Tinamous formed a very distinct group of birds, which, though not to be removed from the *Carinatæ*, presented much resemblance to the *Ratitæ*. M. Alix also has, from an independent investigation of the osteology and myology of *Nothura major*, come to virtually the same conclusion (Journ. de Zool. iii. pp. 169 and 252, pls. viii.–xi.). (*A. Newton.*)

Dr. Stejneger (Kiugsl. Stand. Nat. Hist. iv. (Birds) p. 51, 1885) has emphasized the many Struthious characters of the Tinamous.

Mr. Seebohm (Class. B. p. 43) says that "the Tinamous appear to form a link between the *Gallinæ* and the Apteryges. The sternum is quite unique, but it approaches nearest to that of the *Gallinæ* and is as far as possible from that of the *Ratitæ*. In their pterylosis the Tinamous are Galline, and not in the least Struthionine. On the other hand, the pelvis and the palate have certain characteristics which are only to be found in the Struthioniformes."

Mr. R. B. Sharpe in 1891 ('Review of Recent Attempts to Classify Birds') agrees with Seebohm's classification, and places the Tinamous after the *Ratitæ* at the beginning of the *Carinatæ*, just before the *Galliformes*.

One year later, Dr. Gadow (P. Z. S. 1892, p. 243) placed the *Crypturiformes*, as he calls the Tinamous, immediately after the *Anseriformes* and before the *Galliformes*, giving the following diagnosis:—

"Neotropical. Nidifugous. Phytophagous.

"Schizognathous. Vomer fused with bones of palate. (*Unique.*)

"Basipterygoid processes present.

"Rhamphotheca compound. Nares impervious. Holorhinal.

"Sternum with very slender and long mesosternum and simple posterior lateral processes. Procoracoid process rudimentary.

"With incisura ischiadica.

"Hypotarsus simple.

"Flexors of type II.

"Neck with lateral apteria.

"Aftershaft rudimentary.

"Oil-gland tufted. Quinto-cubital.

"Ten primaries.

"Plagiocœlous, type V. Cæca large. Crop globular."

In a more recent work (Bronn's 'Klassen und Ordnungen des Thier-Reichs,' vi. Vögel, p. 160) Dr. Gadow defines very shortly the *Tinamiformes* as Nidifugous Carinatæ with incisura ischiadica and without pygostyle, and places them between the *Falconiformes* (!) and the *Galliformes*.

Only one family.

Family TINAMIDÆ.

Key to the Genera.

a. With a hind toe. (*Tinaminæ*.)
  a'. Tail-feathers ten, hidden by the upper tail-coverts.
    a''. Hind aspect of the tarsus rough.
      a'''. Scales of the hind aspect of the tarsus with the upper margin prominent; toes short ..... 1. TINAMUS, p. 496.
      b'''. Scales of the hind aspect of the tarsus not prominent on the upper margin; toes, especially the middle one, long .. 2. NOTHOCERCUS, [p. 509.
    b''. Hind aspect of the tarsus smooth ..... 3. CRYPTURUS, [p. 514.
  b'. Tail-feathers rudimentary, mixed with the upper tail-coverts.
    c''. Bill rather long, curved and tapering to a point.
      c'''. Hind toe rather long; primaries uniform rufous ..... 4. RHYNCHOTUS, [p. 547.
      d'''. Hind toe short; primaries not uniform rufous ..... 5. NOTHOPROCTA, [p. 550.
    d''. Bill rather short, almost straight, not gradually tapering to a point, but more bent at the tip.
      e'''. Upper tail-coverts not very long; sexes similar ..... 6. NOTHURA, p. 558.
      f'''. Upper tail-coverts of the male extremely long and abundant ..... 7. TAONISCUS, [p. 564.
b. Hind toe wanting. (*Tinamotidinæ*.) [p. 566.
  c'. Acrotarsi squamated, or with transverse scales. 8. CALOPEZUS,
  d'. Acrotarsi reticulated, or with hexagonal scales ..... 9. TINAMOTIS, [p. 567.

Subfamily I. TINAMINÆ.

1. TINAMUS.

	Type.
Tinamus, *Lath. Ind. Orn.* ii. p. 633 (1790)	T. major.
Cryptura, *Vieill. Analyse*, p. 52 (1816)	T. major.
Pezus, *Spix, Av. Bras.* ii. p. 61 (1825)	T. major.
Trachypelmus, *Cab. in Schomb. Reis. in Br. Guian.* iii. p. 749 (1848)*	T. major.
Trachypelma, *Gieb. Thes. Orn.* iii. p. 648 (1877).	

Range. Confined to the Neotropical Region, from Mexico to Peru and Paraguay.

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* Or 1845 according to G. R. Gr. Hand-list, iii. p. 3.

Key to the Species *.

a. General colour very dark, olive and slaty black; breast slaty grey; upper part of the head black. Size very large ..... *tao*, p. 497.
b. General colour of the upper parts olive, more or less brown; breast not slaty grey.
b'. Wings more than 8 inches.
b''. Upper part of head black, with no chestnut-brown colour.
b'''. Primaries, primary-coverts, and bastard-wing greyish ..... *robustus*, p. 500.
c'''. Primaries, primary-coverts, and bastard-wing blackish ..... *fuscipennis*, p. 500.
c''. Upper part of head not entirely black.
d'''. Upper part of head olive-brown; two longitudinal rufous-buff bands on the sides of the nape ..... *solitarius*, p. 501.
e'''. Upper part of the head partly or entirely rufous-brown or chestnut.
*e*⁴. Occipital crest of pendent feathers more or less distinct.
*e*⁵. Sides of the head bright rufous or conspicuously rufescent; ear-coverts rufous ..... *major*, p. 502.
*f*⁵. Sides of the head dusky or blackish; ear-coverts blackish.
*f*⁶. Slate-grey colour of the upper part of the head confined to the forehead ..... *subcristatus*, p. 504.
*g*⁶. Slate-black colour of the upper part of the head extended all over the anterior half ..... *latifrons*, p. 506.
*f*⁴. No distinct occipital crest.
*g*⁵. Sides of the head distinctly rufous; upper part of the head uniform bright rufous or cinnamon. *ruficeps*, p. 506
*h*⁵. Sides of the head not distinctly rufous; upper part of the head deep chestnut, blackish on the forehead in some specimens .... *castaneiceps* p. 507.
c'. Wings 8 inches, conspicuously spotted with whitish buff; size rather small; upper part of the head blackish ..... *guttatus*, p. 508.

1. Tinamus tao.

Tinamus tao, *Temm. Pig. et Gallin.* iii. pp. 569, 749 (Pará, Brazil) (1815); *Steph. Gen. Zool.* xi. 2, p. 408 (1819); *G. R. Gr. Gen. B.* iii. p. 524, n. 1 (excl. syn.) (1844); *Bp. Compt. Rend.* xlii. p. 881,

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* TINAMUS INTERMEDIUS.

Trachypelmus intermedius, "*Cab.*," *Heine u. Reknw. Nomenel. Mus. Hein. Orn.* p. 303, n. 4 (Bogota) (1889) (descr. nulla).

I am not aware of Cabanis having described a species of *Tinamus* with the above name.

n. 314 (excl. syn.) (1856); *G. R. Gr. List Gallinæ Brit. Mus.* p. 96 (Venezuela) (1867); *Pelz. Orn. Bras.* pp. 290, 453, lv (Matogrosso, Borba, Miranha) (1871); *G. R. Gr. Hand-list*, iii. p. 3, n. 9857 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 2 (Amaz., Guiana, Venezuela, Columbia) (1873); *Gieb. Thes. Orn.* iii. p. 638 (excl. syn.) (1877); *Schleg. Mus. P.-B.*, Tinami, p. 8 (1880); *Hartert, Kat. Vogelsamml.* p. 206, n. 3093 (Brazil) (1891).

Crypturа solitaria, part., *Vieill. N. D.* xxxiv. p. 106 (*nec* p. 105) (1819).

Tinamus brasiliensis, part., *Temm. Pl. Col., genre* Tinamou, sp. 6 (1826); *Less. Man. d'Orn.* ii. p. 206 (1828).

Crypturus canus, *Wagl. Isis*, 1829, p. 746; *G. R. Gr. Gen. B.* iii. p. 524, n. 2 (1844).

Crypturus tao, *Less. Tr. d'Orn.* p. 511 (part.) (1831); ? *Thienem. Fortpflanz.* p. 22, t. v. f. 1 (egg) (1845).

Crypturus kleei, *Tsch. Arch. f. Naturg.* 1843, i. p. 387 (Rio Chanchamayo and Chunchotambo), 1844, i. p. 308, n. 282; *id. Faun. Per., Aves*, pp. 47, 284, t. xxxii. (1846) (type examined) *.

Tinamus kleesi (*errore*), *G. R. Gr. Gen. B.* iii. p. 524, n. 16 (1844), Append. p. 25 (1849).

Tinamus kleei, *Rchnb. Syn. Av.*, Gallinaceæ, t. 285. f. 1563 (1848) (*ex Tschudi*); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 24 (1867); *id. Hand-list*, iii. p. 4, n. 9865 (1871); *Tacz. P. Z. S.* 1874, p. 563 (Monterico); *Schleg. Mus. P.-B.*, Tinami, p. 8 (critical) (1880); *Tacz. P. Z. S.* 1882, p. 3 (N.E. Peru); *id. Orn. Pér.* iii. p. 293, *Tables*, p. 106 (1886).

Trachypelmus canus, *Cab. in Schomb. Reise in Brit. Guian.* iii. p. 749 (1848); *Licht. Nom. Av.* p. 87 (Pará) (1854); *Burm. Syst. Ueb. Thier. Bras.* iii. p. 326 (1856); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Porto Cabello) (1890).

Tinamus weddellii, *Bp. Compt. Rend.* xlii. p. 881, n. 313 (Bolivia), p. 954 (1856); *id. Tabl. Parall. ordre Gallin.* (extract) p. 12, no. 314, p. 15 (1856) (descr. princeps); *id. Compt. Rend.* xliii. p. 572 (=canus) (1856).

Tinamus kleaei, *Bp. Compt. Rend.* xlii. p. 881, n. 315 (1856); *Gieb. Thes. Orn.* iii. p. 636 (1877).

Tinamus canus, *Bp. Compt. Rend.* xlii. p. 881, n. 316 (1856), xliii. p. 572 (1856); *Sclat. P. Z. S.* 1857, p. 20 (Bogota, *Lawrence Coll.*); *G. R. Gr. List Gallinæ Brit. Mus.* p. 131, n. 23 (1867); *id. Hand-list*, iii. p. 4, n. 9866 (1871); *Gieb. Thes. Orn.* iii. p. 635 (1877).

Tinamus plumbeus, *Natter. Cat. MS., teste Pelz. Orn. Bras.* p. 290 (1871).

? Trachypelmus tao, *Nathus. J. f. O.* 1879, p. 258.

Tinamus blasiusi (!), *Dub. Mém. Soc. Zool. Fr.* 1894, p. 404 (=T. kleei) (specimen examined) †.

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* Thanks to Prof. Paul Godet, Director of the Museum of Neuchâtel, I have been able to examine the type of *C. kleei*, and to identify it with *T. tao*. The dimensions (15 inches) given by Tschudi not agreeing with those of *T. tao*, are evidently wrong.

† M. Dubois has identified with *T. kleei* a bird in the Brussels Museum which appears to be the type of *T. blasii*, Bp.; and no doubt he is right in his identification of the specimen, which he has kindly sent me for inspection; but as it does not agree at all with Bonaparte's description, I was inclined to suppose that the bird is not the real type. M. Dubois, however, assures me

This large species is easily distinguished by the dark olive-slaty tinge of its plumage.

Adult male. Upper part of the head and nape black; sides of the head black, speckled with white; from each side of the occiput start two whitish bands mixed with blackish, running on the sides of the nape; throat white, mottled with black; lower part of the neck and breast slaty grey, more or less waved with darker lines; upper parts greyish olive, waved with black lines and bars, broader on the lower back and rump; upper wing-coverts like the upper back; flanks greyish, waved with irregular buff bands; middle of the abdomen buff; under tail-coverts grey, rufescent along the middle and more or less waved with irregular grey lines; primaries, primary-coverts, and bastard-wing uniform slaty black; under wing-coverts slaty grey; tail slaty black, the outer edges of the feathers freckled with olive: "iris brown-red" (*Goering*), "dark brown; bill dark brown, with the lower mandible yellowish; feet blackish olive, with the nails yellow" (*Taczanowski*). Total length about 21 inches, wing 11, tail 5, culmen 1·5, tarsus 3.

Hab. Amazons, Guiana, Venezuela, Colombia, Peru, and Bolivia.

a. Ad. st.	Venezuela.	Purchased.
b. ♂ ad. sk.	San Esteban, Venezuela (*Goering*).	Salvin-Godman Coll.
c. Ad. sk.	Vicinity of Bogotá, New Granada.	Salvin-Godman Coll.

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that there is no possible doubt about it. I add the synonymy and Bonaparte's original description:—

TINAMUS BLASII.

Tinamus [blasii] *, *Bp. Compt. Rend.* xliii. p. 573 (1856) (Chili, Mus. Bruxelles); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 22 (1867); *id. Hand-list*, iii. p. 4, no. 9867 (1871); *Gieb. Thes. Orn.* iii. p. 635 (1877).

"Par la grosseur et la couleur il se rapproche du *T. major*, s'en distinguant par les plumes prolongées qui forment aussi une sorte de crinière, comme dans *suberistatus*, seul, jusqu'à présent, à nous offrir ce caractère. Le *sommet de la tête et ta huppe sont d'un brun marron rougeâtre beaucoup plus foncé* que chez *major*; le front, la partie antérieure de la tête et les paupières, sont noirâtres. La nuance prédominante, sur les parties supérieures, ne tend pas au vert olivâtre, comme chez le *major*, mais au brun olive roussâtre; presque toutes les parties inférieures sont vermiculées d'une couleur plus foncée que dans le *major*. Sa longueur est de 45 centimètres; son bec est long de 5 centimètres, ses ailes en mesurent 28 et ses tarses 7½. Il porte la petite crinière rasée (en brosse) de *suberistatus*, mais elle est entièrement noirâtre, ondulée et pointillée de gris jaunâtre; les parties inférieures, plus claires, sont entièrement vermiculées de blanchâtre; les petits points sont très-nombreux et serrés sur la gorge, qu'ils envahissent et couvrent complètement, traçant aussi deux lignes le long de la partie postérieure du col." (*Bonaparte.*)

Hab. Chili! (*Mus. Bruxelles*).

* Bonaparte, speaking of this species, said that he was dedicating it to Dr. Blasius, but he did not actually give the name *blasii*.

2. Tinamus robustus.

Tinamus major ?, *Moore* (*nec Gm.*), *P. Z. S.* 1859, p. 63 (Omoa); *Sclat. ibid.* (probably different from *major*); *Sclat. & Salv. Ibis*, 1859, p. 226 (Belize and Omoa); *Salv. Ibis*, 1866, p. 204 (=robustus).

Tinamus robustus, *Sclat. P. Z. S.* 1860, p. 253 (Mexico; descr. nulla); *R. Owen, Ibis*, 1861, p. 59; *Salv. Ibis*, 1861, p. 355 (Yzabal); *Parker, P. Z. S.* 1862, pp. 257, 259, 1863, p. 517 (sacral vertebræ); *Salv. Ibis*, 1865, p. 195; *Parker, Tr. Zool. Soc.* v. pp. 205 *et seq.* (1866); *G. R. Gr. List of Gallinæ Brit. Mus.* p. 97 (Mexico) (1867); *Huxley, P. Z. S.* 1867, p. 425 (cut of the under view of the skull); *Sclat. & Salv. Exot. Orn.* p. 87 (part.), pl. xliv. (1868) (descr. princeps); *Sumichrast, Mem. Bost. Soc. N. H.* i. p. 560 (1869); *G. R. Gr. Hand-list*, iii. p. 3, no. 9861 (part.) (1871); *Salv. & Sclat. Nom. Av. Neotrop.* p. 152, n. 4 (part.) (1873); *Sorby, P. Z. S.* 1875, p. 361 (egg); *Gieb. Thes. Orn.* iii. p. 637 (1877); *Schleg. Mus. P.-B.*, Tinami, p. 11 (part.) (1880); *Sumichrast, La Naturaleza*, v. p. 229 (1881) (State of Vera Cruz); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 51 (1888).

Trachypelmus robustus, *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Playa Vicente) (1890).

Adult. Above olive-brown, irregularly barred with black; upper part of the head black, occiput with some rufous-brown markings, which on the nape become rufescent narrow bars; sides of the head varied with black and rufescent; throat white; lower parts pale olive-grey, darker on the breast and sides, and more or less waved with narrow dark lines; flanks with broader brown irregular bars; lower abdomen in some specimens more or less rufescent; under tail-coverts buff, each feather more or less varied with olive on the edges of both webs; upper wing-coverts like the back, secondaries usually browner; primaries and bastard-wing uniform greyish brown; under wing-coverts greyish brown, the last row lighter and pure grey; tail olive-brown; irides unrecorded; upper mandible blackish olive, lower mandible whitish; feet dark olive. Total length about 16 inches, wing 9·50, tail 3·50, culmen 1·25, tarsus 2·60.

Hab. Mexico and Central America, south to Guatemala and British Honduras.

a. Ad. st.	Mexico.	Gould Coll.
b. Ad. sk.	Choctum, Guatemala, Jan. (*O. Salvin*).	Salvin-Godman Coll. (Type of species figured in 'Exotic Ornithology,' pl. xliv.).
c. ♀ ad. sk.	Sources of R. de la Pasion, Feb. (*O. Salvin*).	Salvin-Godman Coll.
d. Ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.

3. Tinamus fuscipennis.

Tinamus robustus, *Lawr.* (*nec Sclat.*) *Ann. Lyc. N. Y.* ix. p. 140 (Costa Rica) (1868); *Frantz. J. f. O.* 1869, p. 374 (Costa Rica); *Salv. & Sclat. Nom. Av. Neotrop.* p. 152, n. 4 (part.) (1873); *Salv. Ibis*, 1874, p. 329 (Veragua); *Schleg. Mus. P.-B.*, Tinami, p. 12, specim. 5 (Costa Rica) (1880); *Zeled. Cat. Av. Costa Rica*, p. 29 (1882); *id. Pr. U.S. Nat. Mus.* 1885, p. 112, n. 596 (Costa Rica); *id. An. Mus. Nac. Rep. Costa Rica*, 1887, p. 128, n. 609; *Richmond, Pr. U.S. Nat. Mus.* xvi. p. 525 (Escondido, Nicaragua) (1893).

Similar to *T. robustus*, but browner on the upper parts, more olive on the breast, more reddish on the abdomen, and principally differing in the much darker, nearly black primaries, primary-coverts, and bastard-wing.

Hab. Central America: Nicaragua, Costa Rica, and Veragua.

a. ♂ ad. sk.	Escondido River, Nicaragua, Nov. (*C. W. Richmond*).	Salvin-Godman Coll.	}	Types of the species.
b. ♀ ad. sk.	San Rafael, Nicaragua, Feb. (*W. B. Richardson*).	Salvin-Godman Coll.	}	
c. ♀ ad. sk.	Veragua (*Arcé*).	Salvin-Godman Coll.		

4. Tinamus solitarius. (Plate VII.)

Mocoicogoé, *Azar. Apunt.* i. p. 57, n. 332 (1805); *id. Voy.* (*Sonn.* ed.) iv. p. 154 (1809).

Tinamus tao, part., *Temm. Pig. et Gallin.* iii. pp. 569, 572, 749 (1815); *Less. Tr. d'Orn.* p. 511 (1831); *G. R. Gr. Gen. B.* iii. p. 524, n. 1 (1844); *Hartl. Ind. Azar. Apunt.* p. 21, n. 332 (1847); *G. R. Gr. Gen. B.* Append. p. 25 (1849); *Bp. Compt. Rend.* xlii. p. 881, n. 314 (part.) (1856), xliii. p. 572 (1856); *id. Tabl. Parall. Gallin.* p. 12, n. 313 (part.) (1856); *G. R. Gr. Hand-list*, iii. p. 2, n. 9857 (1871); *Gieb. Thes. Orn.* iii. p. 638 (part.) (1877).

Cryptura solitaria, *Vieill. N. D.* xxxiv. p. 105 (1819) (*ex Azara*).

Tinamus solitarius, *Vieill. Enc. Méth.* i. p. 373, n. 11 (1820); *Pelz. Orn. Bras.* pp. 290, 453, lv (Rio Janeiro, Mattodentro, Ypanema, Ytararé) (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 1 (Paraguay and Brazil) (1873); *Berl. J. f. O.* 1874, p. 251 (Santa Catharina); *Sorby, P. Z. S.* 1875, p. 361 (egg); *Schleg. Mus P.-B.*, Tinami, p. 10 (1880); ? *Sclat. List Vert. An.* 8th ed. p. 545 (1883) (Zool. Gard.); *Berl. u. Jher. Zeitschr. ges. Orn.* 1885, p. 182 (Taquara do Mundo novo); *Berl. J. f. O.* 1887, p. 126, n. 349; *Sclat. Ibis*, 1890, p. 82 (quintocubital).

Crypturus tao, *Licht.* (*nec Temm.*) *Verz. Doubl.* p. 67, n. 701 (San Paulo) (1823); *Wagl. Syst. Av., gen.* Crypturus, sp. 1 (1827); *id. Isis*, 1829, p. 745.

Pezus serratus, *Spix, Av. Bras.* ii. p. 61, t. 76 (Rio Negro) (1825)*.

Crypturus serratus, part., *Wagl. Syst. Av., gen.* Crypturus, sp. 2 (1827); *id. Isis*, 1829, p. 746; *Sw. Class. B.* ii. p. 345 (1837).

Tinamus brasiliensis, *Wied* (*nec Lath.*) *Reise nach Bras.* i. pp. 256, 262 (1820), ii. pp. 124, 135 (1821); *Temm. Pl. Col., genre* Tinamou, sp. 6 (part.) (1826); *Wied, Beitr. Naturg. Bras.* iv. p. 496, t. i. f. 2 (larynx) (1832); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (part.) (1838); *Euler, J. f. O.* 1867, pp. 190, 196, 198.

Tinamus major, *Rchnb. Syn. Av., Gallinaceæ*, t. 284. f. 1558 (1848) (*ex Spix*); ? *Reinhardt, Vid. Medd. naturh. Foren. Kjöbenhavn*, 1870, p. 50 (Minas Geraes).

Trachypelmus tao, *Cab.* (*nec Temm.*) *in Schomb. Reise Brit. Guian.* iii. p. 749 (1848); *Licht. Nom. Av.* p. 87 (1854); *Burm. Syst. Uebers. Th. Bras.* iii. p. 324 (1856).

Tinamus guttulatus, *G. R. Gr. List Gallinæ B. M.* p. 9 (Brazil) (1867) (immat.); *id. Hand-list*, iii. p. 3, n. 9860 (1871); *Pelz. Orn. Bras.* p. 292 (note), pp. 453, lv (1871); *Gieb. Thes. Orn.* iii. p. 636 (1875).

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* Spix's plate agrees exactly with Rio Paraná and Rio de Janeiro specimens.

Adult male. Similar to *T. robustus* but larger, with the barrings on the upper parts more regular and broader; upper part of head and nape olive-brown; on the sides of occiput and nape two distinct light buff longitudinal bands; sides of head varied with olive-brown and brown-black: throat white, broadly surrounded below with rufescent; lower neck and breast greyish olive; flanks rufescent, barred with brown; middle of the abdomen greyish olive; under tail-coverts buff, varied with olive-brown on the edges; wings like the back, but browner, especially the secondaries, which have a rufescent tinge; primaries, primary-coverts, and bastard-wing uniform slaty black; under wing-coverts blackish, edged with olive-brown, the last row uniform slate-grey; tail olive-brown, irregularly freckled with black and with some rufescent-brown markings: "iris reddish brown; feet light plumbeous; bill bluish black" (*D'Azara*). Total length about 20 inches, wing 10·50, tail 4·50, culmen 1·42, tarsus 2·9.

Female. Similar to the male.

Immature birds have the upper parts more or less dotted with whitish small spots.

Young in down. Upper part of the head anteriorly pale brown-buff, posteriorly golden buff-chestnut; across the top of the head a chestnut band, connected with a chestnut band on both sides of the occiput; sides of the head pale brown-buff; a line through the lores, another from the base of the lower mandible joined to a patch on the auricular region, nape and sides of the neck deep chestnut; two snow-white patches on the sides of the nape; inter-scapular region greyish buff, with obsolete cross dusky bars, the hairy tips of the feathers chestnut; scapulars chestnut; lower back and rump pale greyish buff-brown, with the hidden part of the feathers buff; throat white, but the tips of the feathers, especially on the lower parts, dusky; lower fore neck and breast chestnut, changing into dull whitish on the abdomen.

The bird figured on Plate VII. is one of the types of *T. guttulatus*, Gr.

Hab. Paraguay and Southern Brazil.

a. Ad. sk.	Rio Paraná, Brazil (*Rogers*).	Salvin-Godman Coll.
b. ♀ ad. sk.	São Paulo, Brazil (*Joyner*).	Salvin-Godman Coll.
c–g. ♂ ♀ ad., imm., et pull. sk.	Rio de Janeiro.	A. Fry, Esq. [P.].
h, i. ♂ ♀ imm. st.	Brazil (*Leadbeater*).	Purchased. (Types of *T. guttulatus*, Gr.)

5. Tinamus major.

? Macucagua, *Marcgr. Hist. Av. Bras.* p. 213; *Willughb. Orn.* p. 163, t. 26.
? Yambou, *Marcgr. op. cit.* p. 192.
? Perdix brasiliensis, *Briss. Orn.* i. p. 227, n. 4 (1760).
? Perdix major brasiliensis, *Briss. Orn.* i. p. 227, n. 5 (1760).
Tinamou de Cayenne, *D'Aubent. Pl. Enl.* 476.

Magoua, *Buff. Hist. Nat. Ois.* iv. p. 507, pl. 24 (1778).
Great Tinamou, *Lath. Syn.* ii. 2, p. 724, n. 1 (1783).
Tetrao major, *Gm. S. N.* i. 2, p. 767, n. 63 (1788).
Tinamus brasiliensis, *Lath. Ind. Orn.* ii. p. 633, n. 1 (1790); *Temm. Pig. et Gallin.* iii. pp. 562, 748 (1815); *Steph. Gen. Zool.* xi. 2, p. 406 (1819); *Temm. Pl. Col., genre* Tinamou, sp. 6 (part.) (1826); *Less. Man. d'Orn.* ii. p. 206 (part.) (1828); *id. Tr. d'Orn.* p. 512 (1831); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839); *Pelz. Orn. Bras.* pp. 291, 453, lv (Matogrosso, Guaporé, Cachoeira da Bananeira, Borba, Rio Negro, Marabitanas, Barra do Rio Negro) (1871); *id. Ibis*, 1873, p. 37.
? Tinamus brasiliana, *Bonn. Enc. Méth.* i. p. 224, n. 1, pl. 89. f. 3 (1791).
Crypturus major, *Illig. Prodr. Mamm. et Av.* p. 245 (1811).
Cryptura magoua, *Vieill. N. D.* xxxiv. p. 104 (1819).
Crypturus serratus, *Wagl. Syst. Av., gen.* Crypturus, sp. 2 (part.) (1827).
Tinamus major, *G. R. Gr. Gen. B.* iii. p. 524, n. 3 (1844); *Bp. Compt. Rend.* xlii. p. 881, n. 312 (1856), xliii. p. 573 (note) (1856); *Salv. Ibis*, 1861, p. 356 (egg); *G. R. Gr. List Gallinæ Brit. Mus.* p. 96 (syn., but not specim. *a*) (1867); *id. Hand-list*, iii. p. 3, n. 9858 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 152, n. 5 (1873); *Schleg. Mus. P.-B.*, Tinami, p. 13 (part.) (1880); *Tristr. Cat. Coll. B.* p. 2 (1889); *Hartert, Kat. Vogelsamml.* p. 206, n. 3092 (1891).
Crypturus brasiliensis, *Thienem. Fortpflanz.* p. 23, t. v. f. 2 (1845).
Trachypelmus major, *Cab. in Schomb. Reis. in Brit. Guian.* iii. p. 749 (1848); *Licht. Nom. Av.* p. 87 (1854); ? *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Brazil) (1890).
Trachypelmus brasiliensis, *Burm. Syst. Ueb.* iii. p. 325 (1856); *Nathus. Zeitschr. wissensch. Zool.* xxi. pp. 352, 354, t. xxvi. ff. 17, 18 (egg structure) (1871); *id. J. f. O.* 1879, p. 258; *Mangelsdorff, MB. deutsch. Ver. Schutze*, 1890, pp. 155–164, pl. ii.
Tinamus subcristatus, *Pelz.* (*nec Cab.*) *Orn. Bras.* p. 291, note 3 (San Joaquim and Barra do Rio Negro) (1871).
Tinamus cristatellus, *Natt. Cat. MS., teste Pelzeln, l. c.*

This species is to be recognized by the bright rufous-cinnamon colour of the upper part of the head, tinged with greyish on the forehead of the male, combined with the very light, mostly white underparts.

Adult male. Upper parts olive, with irregular black bar-like marks; upper part of the head and occipital crest rufous cinnamon; forehead, lores, and feathers behind the eyes greyish; ear-coverts chestnut-brown; sides of the head and neck rufescent, the sides of the head and nape with narrow dusky bars, the sides of the neck with dusky stripes along the middle of the feathers; throat white, fore neck and upper breast dull buff with undulated cross dusky lines; remainder of the lower parts buffy white, nearly uniform along the middle of the breast and abdomen; sides, flanks, and tibial feathers with irregular dusky bars; under tail-coverts rufescent, with irregular olive bars, and these with two narrow irregular black cross lines, one anteriorly and the other posteriorly; upper wing-coverts like the back; primaries uniform greyish;

bastard-wing, primary-coverts, and secondaries olive-rufous, with irregular black bar-like marks; under wing-coverts olive-buff, with irregular black lines, the greater ones uniform greyish; tail olive-brown, with irregular black lines, and rufous-buff marks on the outer web: bill dusky above, paler (olive?) below; feet in the dry skin pale olive. Total length about 17 inches, wing 9·4, tail 3·75, culmen 1·25, tarsus 2·56.

Female. Similar to the male, but somewhat larger, and whiter below; upper part of the head uniform rufous cinnamon; no greyish tinge on the forehead and sides of the head, which are uniform with the pileum, only a shade lighter; ear-coverts also rufous cinnamon; no conspicuous occipital crest; fore neck and breast nearly uniform greyish olive; upper parts less marked with black; secondaries browner. Total length about 19 inches, wing 9·4, culmen 1·30, tarsus 2·50.

Both the birds described belong to Natterer's collection and are from Rio Negro: they have been attributed by von Pelzeln to two different birds, the male to *T. subcristatus* * and the female to *T. brasiliensis*; but they are so much alike that I cannot believe that they are specifically different, as it would be impossible that two such allied forms should be found in the same region; the differences appear to me to be only sexual.

I am not quite certain as to the proper name of this species, the description of the old authors being very unsatisfactory; for the present I have thought it best to retain the name *major*, although it was applied to the bird from Cayenne, where I am not aware that the species has been found in recent times. Marcgrave's and Brisson's descriptions may apply to *T. solitarius*, to which I have no doubt *Pezus serratus*, Spix, also belongs.

Hab. Central and Northern Brazil.

a. ♂ ad. sk.	S. Joaquim on the Rio Negro, July (*Natterer*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Rio Negro, Dec. (*Natterer*).	Salvin-Godman Coll.

6. Tinamus subcristatus.

Tinamus brasiliensis, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 52, specim. *a*, *b*, *d* (1844).

Trachypelmus subcristatus, *Cab. in Schomb. Reis. Brit. Guian.* iii. p. 749 (1848); *Licht. Nom. Av.* p. 87 (1854); *Burm. Syst. Ueb. Thier. Bras.* iii. p. 326 (1856); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Guiana) (1890).

Tinamus ? subcristatus, *Bp. Compt. Rend.* xlii. p. 881 (1856), xliii. p. 572 (1856); *G. R. Gr. List Gallinæ Brit. Mus.* p. 96 (1867); *id. Hand-list*, iii. p. 3, n. 9859 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, sp. 6 (Guiana) (1873); *Salv. Cat. B. Strickl. Coll.*

* Von Pelzeln (*l. c.*) has a remark concerning the differences between the specimens collected by Natterer and Cabanis's description of *T. subcristatus*.

p. 640, n. 3110 (1882); *id. Ibis*, 1886, p. 181 (British Guiana); *W. L. Sclat. Ibis*, 1887, p. 317.

Tinamus major, part., *G. R. Gr. List Gallinæ Brit. Mus.* p. 96, specim. *a* (1867); *Gieb. Thes. Orn.* i. p. 636 (part.) (1877); *Schleg. Mus. P.-B.*, Tinami, pp. 13–17, specim. 1, 5, 6 (1880).

Tinamus major subcristatus, *Schleg. Mus. P.-B.*, Tinami, p. 15 (1880).

Adult male. Forehead and above the eyes greyish black, remainder of the upper part of the head, with the occipital pendent crest, chestnut; sides of the head anteriorly and the ear-coverts blackish, posteriorly and the sides of the neck varied with rufous and blackish, each feather having the centre blackish and the edges rufous, so that those parts have a distinct scaly appearance: throat white: lower neck pale olive-brown; back, rump, and upper tail-coverts olive-brown, the latter with some buff edges and obsolete bars; wings olive, but the secondaries rufous olive-brown; primaries uniform greyish brown; primary-coverts and bastard-wing greyish brown, with a slight reddish-brown tinge; under wing-coverts greyish brown, distinctly edged with olive, the last row pure grey; tail olive rufous-brown; lower parts pale olive-grey, finely waved along the middle with dusky lines; flanks buff, broadly and irregularly barred: bill in dry skin brown above, pale below; feet olive. Total length about 17 inches, wing 9·25, tail 3·25, culmen 1·30, tarsus 2·60.

Female. Differs from the male in having the upper parts or back and wings more or less with black transverse markings or barrings.

Young. More reddish than the adult; upper parts dotted with paler rufous spots.

A young in down from Takutu (apparently belonging to this species) has the forehead and temporal regions mixed with greyish and chestnut; a loral spot and an ear-patch chestnut; a large patch from the crown to the occiput brown-chestnut; mantle greyish brown, with the hairy tips of the feathers chestnut: lower back and rump yellowish, thickly dotted with brown; scapulars, breast, and sides chestnut; throat and abdomen greyish; sides of the rump glossy chestnut; wings greyish brown.

Hab. Guiana.

a. Ad. st.	S. America.	Gen. T. Hardwicke [P.]. (*T. major*, Gr., specim. *a*.)
b, *c*. Ad. st. & sk.	Cayenne.	Purchased.
d, *e*. ♂ ♀ ad. sk.	Camacusa, Brit. Guiana, Feb., Sept. (*H. Whitely*).	Salvin-Godman Coll.
f. ♀ ad. sk.	Bartica Grove, Brit. Guiana, Sept. (*H. Whitely*).	Salvin-Godman Coll.
g. ♂ juv. sk.	Merumé Mts., Brit. Guiana, July (*H. Whitely*).	Salvin-Godman Coll.
h. Pull. sk.	Takutu R., Brit. Guiana (*H. Whitely*).	Salvin-Godman Coll.

7. Tinamus latifrons.

This species has a pendent occipital crest like *T. subcristatus*, from which it differs in having the slaty-black colour on the forehead more extended, covering entirely the anterior half of the crown, the rufous-chestnut colour of the occiput and crest darker and confined to the edges of the feathers, which are otherwise blackish; the secondaries of a darker brown freckled with black, with no reddish tinge; the upper parts olive-brown, with broader black barrings, and the lower of a greyish olive, more uniformly covered with irregular and broader dusky bars; under tail-coverts olive-brown, variegated with rufous-buff: upper mandible dusky, the lower pale; feet in dry skin dark olive. Total length about 17 inches, wing 9·8, tail 3·10, culmen 1·2, tarsus 2·5.

The second specimen, mentioned below, apparently *immature*, has the upper parts dotted with rufous-buff, the black bar-like marks on the upper parts broader, and the wings tinged with rufous brown.

Hab. Western Ecuador.

a, *b*. Ad. et imm. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll. (Types of species.)

8. Tinamus ruficeps.

Tinamus peruvianus, *Mus. Brux.*; *Bp. Compt. Rend.* xliii. p. 573 (note) (1856); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 31 (1867); *id. Hand-list*, iii. p. 4, n. 9879 (1871); *Gieb. Thes. Orn.* iii. p. 637 (1877); *Dubois, Mém. Soc. Zool. Fr.* 1894, p. 404 (=ruficeps, *Sclat. & Salv.*)*.

Tinamus ruficeps, *Sclat. & Salv. Nom. Av. Neotrop.* pp. 152, 162, sp. 30 (part., Ecuador) (1873); *Gieb. Thes. Orn.* iii. p. 637 (1877); *Sclat. & Salv. P. Z. S.* 1879, p. 548 (Remedios); *Tacz. Orn. Pér.* iii. p. 292 (Monterico), *Tables*, p. 136 (1886).

Tinamus major, *Tacz.* (*nec Gm.*) *P. Z. S.* 1874, p. 563 (Monterico); *Schleg. Mus. P.-B.*, Tinami, pp. 13–17 (part., Iquitos) (1880).

Tinamus major ruficeps, *Schleg. Mus. P.-B.*, Tinami, p. 15 (1880).

Similar to *T. major*, from which it differs principally in constantly wanting the occipital crest, and in having the lower parts not so whitish, the breast and the remainder of the lower parts being more olive-greyish; besides, the tibial feathers have constantly dusky bars, which are usually wanting in *T. major*.

Adult (type). Upper parts olive with irregular black bars, secondaries more reddish brown; upper part of the head bright chestnut, a shade paler on the forehead; ear-coverts chestnut; nape chest-

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* Recently M. Dubois has identified *T. peruvianus*, Bp., with *T. ruficeps*; I add Bonaparte's description, which is too incomplete and too vague to be taken into consideration:—

"Minor, brunneo-rufus, dorso alisque maculis sparsis nigris; subtus pallidior, olivascens, maculis nullis. Long. tot. 420 millim., rostri 48, alæ 235, tarsi 60."

nut, with narrow black barrings; sides of the head and two obsolete bands on the sides of the nape pale rufescent, with brown mottlings; throat white; lower part of the fore neck, breast and sides greyish olive; lower breast and abdomen whitish, with grey zigzag or irregular transverse lines; flanks whitish buff, with brown bars; under tail-coverts rufous buff with irregular olive bars, which are surrounded with a narrow black line; primaries uniform greyish brown; primary-coverts and bastard-wing feathers freckled with rufous brown on the outer web; under wing-coverts greyish olive, with some small blackish markings, the inner ones paler, the last row uniform grey; tail brown freckled with black: bill in dry skin dusky above, pale below; feet olive. Total length about 16 inches, wing 9, tail 3·75, culmen 1·25, tarsus 2·6.

Female. Similar to the type.

Hab. Ecuador, Upper Amazon, Peru (?), and Antioquia.

a. Ad. sk.	Rio Napo, Ecuador (*fide Verreaux*).	Salvin-Godman Coll. (Type of the species.)
b, *c.* Ad. sk.	Sarayacu, Ecuador (*Buckley*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Yquitos, Upper Amazons, Sept. (*H. Whitely*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Remedios, Antioquia, March (*T. K. Salmon*).	Salvin-Godman Coll.

9. Tinamus castaneiceps. (Plate VI.)

Tinamus major, *Cass.* (*nec Gm.*) *Pr. Ac. Philad.* 1860, p. 195 (Truando).

Tinamus robustus, *Lawr.* (*nec Sclat.*), *Ann. Lyc. N. Y.* vii. p. 477 (Panama) (1862); *Sclat. & Salv. P. Z. S.* 1864, p. 371 (Panama); *Salv. P. Z. S.* 1867, p. 159 (Santiago de Veragua); *Sclat. & Salv. Exot. Orn.* p. 87 (part.) (1868); *Salv. P. Z. S.* 1870, p. 218 (Bugaba).

Tinamus ruficeps, *Sclat. & Salv. Nom. Av. Neotrop.* pp. 155, 162, sp. 30 (part., Panama, Chiriqui) (1873); *Gieb. Thes. Orn.* iii. p. 637 (part.) (1877).

Similar to *T. ruficeps*, but the upper part of the head of a deeper chestnut; the forehead, at least in the males, slightly tinged with blackish; the ear-coverts darker than the pileum, almost black, while in *T. ruficeps* they are of the same rufous tinge as the pileum; the flanks are of a much darker greyish-olive colour.

Hab. Veragua and Panama.

a, *b.* ♂ ♀ ad. sk.	Volcan de Chiriqui (*Arcé*).	Salvin-Godman Coll. (Types of species.)
c. ♂ ad. sk.	Bugaba, Chiriqui (*Arcé*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Lion Hill Station, Panama (*McLeannan*).	Salvin-Godman Coll.

10. Tinamus guttatus.

Crypturus guttatus, *Natt. MS.*; *Thienem. Fortpflanz.* p. 24 (egg) (1845).

Tinamus guttatus, *Natt. Cat. MS.*; *Pelz. Verh. z.-b. Ges. Wien*, 1863, p. 1126; *Natt. ibid.* p. 1128 (1863); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 33 (1867); *Pelz. Orn. Bras.* pp. 292, 453, lv (Borba, S. Carlos, Rio Vaupé, Cachoira de Panore, Pará) (1871); *G. R. Gr. Hand-list*, iii. p. 4, n. 9864 (1871); *Sclat. & Salv. P. Z. S.* 1873, p. 310 (Chamicuros; eggs); *iid. Nomencl. Av. Neotrop.* p. 152, sp. 7 (Amaz. super.); *Gieb. Thes. Orn.* iii. p. 636 (1877); *Schleg. Mus. P.-B.*, Tinami, p. 12 (1880); *Tacz. Orn. Pér.* iii. p. 295, *Tables*, p. 106 (1886); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 51 (types) (1888); *Allen, Bull. Am. Mus. N. H.* ii. p. 112 (Bolivia) (1889).

Easily distinguished by its small size, and by the wings more or less thickly dotted with whitish buff.

Adult male (cotype from Pará). Upper parts olive-brown, back redder; lower back, rump, and upper part of the wing near the back with irregular broadish black bands; wings thickly dotted with white; upper part of the head blackish brown, more greyish on the forehead; sides of the head brownish posteriorly, with the middle part of the neck, all round, brown, varied with rufous spots, and black marks on the edges of the feathers; throat white; lower part of the fore neck and sides olive, changing into reddish or buffish white on the breast; middle of the abdomen white; flanks buff, with irregular dusky bars; under tail-coverts olive-brown, along the middle rufous-chestnut, on both webs varied with dusky marks; upper tail-coverts with narrow irregular whitish bars at the tip and obsolete blackish transverse lines; secondaries olive-brown, darker than the upper wing-coverts, freckled with brown, and marked with white on the edge of the outer webs; primaries uniform greyish brown; under wing-coverts greyish brown, the last row purer and paler grey; tail olive-brown, irregularly barred with black: "iris dark brown; upper mandible black, tip whitish; lower mandible dark brownish grey; feet bluish grey or greyish olive-green" (*Natterer*). Total length about 15 inches, wing 8, tail 3, culmen 1·12, tarsus 2·25.

Two specimens from Peru and Sarayacu have the upper parts with scarcely any black bars, and the whitish-buff spots on the wings larger and less numerous; the one from Sarayacu has the under tail-coverts uniform rufous-chestnut, with no black or olive markings whatever.

Young in down (probably belonging to this species). Similar to the young in down of *T. solitarius*, but differs in being much smaller and also in colouring; the posterior half of the upper part of the head is much darker, of a brown-chestnut, the feathers of the interscapular region darker, and the lower back and rump are of a darker greyish brown; no snowy white patches on the sides of the nape; the white of the throat pure and sharply defined from the chestnut colour of the breast.

Hab. Amazonia, from Pará to Eastern Ecuador, Peru, and Bolivia (?).

a. ♂ ad. sk.	Pará, Nov. (*Natterer*).	Salvin-Godman Coll. (Typical specimen.)
b, *c*, *d*. Ad. et pull. sk.	Sarayacu, Ecuador (*C. Buckley*). (Described by Taczanowski,	Salvin-Godman Coll. Orn. Pér. iii. p. 295.)
e, *f*. ♂ ♀ ad. sk.	Chamicuros, Peruvian Amazons, Feb., Dec.	E. Bartlett, Esq. [C.].
g. Ad. sk.	Peru (*H. Whitely*).	Salvin-Godman Coll. (Described by Taczanowski, l. c.)

2. NOTHOCERCUS.

Nothocercus, *Bp. Compt. Rend.* xlii. p. 957 (1856) ..... Type. N. julius.

Range. Confined to Central America and northern South America, from Costa Rica to Venezuela and Ecuador.

Key to the Species.

a. Throat pure white.
  a'. Upper part and sides of head rufous chestnut, posteriorly brown in the majority of specimens; back broadly barred with black.... *julius*, p. 509.
  b'. Upper part of head entirely black; back narrowly vermiculated with black ..... *nigricapillus*, p. 511.
b. Throat not pure white.
  c'. Throat bright rufous.
    a''. Greater or last row of the under wing-coverts greyish, barred with dull rufous. *bonapartei*, p. 511.
    b''. Greater or last row of the under wing-coverts uniform greyish brown, with no barrings; primaries not distinctly rufous on the inner webs, but greyish freckled with irregular rufous narrow bars ..... *frantzii*, p. 512.
  d'. Throat whitish, washed with rufous; primaries greyish, barred with rufous on the inner webs; greater or last row of the under wing-coverts greyish, barred with dull rufous ..... *intercedens*, p. 513.

1. Nothocercus julius.

Tinamus julius, *Bp. Compt. Rend.* xxxvii. p. 663 (Columbia) (1853); *id. Notes Coll. Delattre*, p. 93 (note) (1854); *Hartl. J. f. O.* 1854, p. 410 (New Granada); *Sclat. P. Z. S.* 1855, p. 163, 1858, p. 76 (Rio Negro, Ecuador); *G. R. Gr. List Gallinæ Brit. Mus.* p. 98 (1867); *Pelz. Orn. Bras.* p. 292 (note) (1871); *Gieb. Thes. Orn.* iii. p. 636 (1877); *Schleg. Mus. P.-B.*, Tinami, p. 18 (1880).

Nothocercus julius, *Bp. Compt. Rend.* xlii. p. 881, no. 331, pp. 954, 957 (1856); *id. Tabl. Parall. Gallin.* (Extract), p. 12, n. 328 (1856); *G. R. Gr. Hand-list*, iii. p. 4, n. 9883 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152 (Columbia & Equatoria) (1873); ? *Pelz. Ibis*, 1875, p. 331 (Spanish Guiana) *; *Tacz. & Berl. P. Z. S.*

* Herr von Pelzeln says that by Spanish Guiana is probably meant the territory between the Upper Rio Negro and Orinoco, or adjacent parts of New Granada.

1885, p. 112 (Ecuador); *Heine u. Reichw. Nom. Mus. Hein. Orn.* p. 304 (Bogota) (1890).

Nothocercus bourcieri, *Bp. Compt. Rend.* xlii. p. 881, n. 330, p. 954 (=julius) (1856).

Adult. Upper part of the head anteriorly rufous chestnut, posteriorly brown, finely barred with rufous; sides of the head rufous brown; throat pure white; upper parts olive-brown, crossed with black bars; on the wings and rump some whitish-buff marks near the tip of the feathers; lower part of the fore neck and upper breast olive-brown, finely vermiculated with black; sides and flanks olive-brown, barred with black; middle of the breast bright rufous; middle of the abdomen also rufous, but paler; under tail-coverts olive-brown, with irregular crescentic black bars, marked with rufous near the edges; primaries greyish brown; outer web of secondaries olive-brown near the edge, varied with black and buff bar-like spots; under wing-coverts greyish brown, the last row lighter grey; tail on the apical portion olive, with irregular crescentic black bands: upper mandible dark, lower mandible pale; feet olive-brown (in dry skins). Total length about 14 inches, wing 8, culmen 1·20, tarsus 2·50.

A fine specimen from New Granada in the Museum of Genoa has nearly the whole head, above and on the sides, bright chestnut.

Young in down. General colour chestnut; forehead and sides of the head rufous; occiput blackish; throat white (Monji, Ecuador).

A *young bird* from Sarayacu, Ecuador, apparently belonging to this species: forehead and upper sides of the head buff; occiput brown; throat white; mantle, sides, and breast chestnut; middle of the back greyish brown; flanks bright glossy chestnut; middle of the abdomen greyish; tail and upper tail-coverts chestnut.

Female. Specimens from Ecuador, according to Taczanowski and Count Berlepsch (P. Z. S. 1885, p. 172), differ from the Bogota male in the following particulars:—"Upper parts darker, more olive and less rufescent, and with broader barrings; the rufous colour of the crown darker and more distinctly undulated with black; the cheeks much less rufescent; the lower part of the fore neck and the sides of the body darker and more strongly barred with black; iris very dark greyish brown."

Specimen *h*, mentioned below, is the only adult bird from Ecuador I have seen; no doubt this has the barrings on the upper parts broader than in the Columbian specimens; besides it has the olive bars paler and almost without any dusky frecklings. It is quite probable that with a large series of specimens we shall be able to separate specifically the Ecuadorian bird.

Hab. New Granada and Ecuador.

a. ♂ ad. sk.	New Granada (*Verreaux Coll.*).	Salvin-Godman Coll.
b–e. Juv. et pull. sk.	New Granada.	Purchased.
f. Ad. sk.	Bogota.	Purchased.
g. Pull. sk.	Bogota, New Granada (*Boucard*).	Salvin-Godman Coll.

h. Ad. sk.	Ecuador (*Verreaux*).	Salvin-Godman Coll.
i. Pull. sk.	Monji, Ecuador (*C. Buckley*).	Salvin-Godman Coll.
k. Pull. st.	No locality.	Old Coll.

2. Nothocercus nigricapillus. (Plate VIII.)

Tinamus nigrocapillus, *G. R. Gr. List Gallinæ Brit. Mus.* p. 98 (Chili !) (1867) ; *id. Hand-list,* iii. p. 4, no. 9863 (1871) ; *Gieb. Thes. Orn.* iii. p. 637 (1877).

Nothocercus nigricapillus, *Sclat. & Salv. Nom. Av. Neotrop.* p. 152 (*ex loco ign.*) (1873).

Type. Upper part of the head and occiput black ; throat white : upper surface and lower neck brownish olive, vermiculated with black ; wings, abdomen, and thighs brownish olive, vermiculated with black and varied with black and white blotches ; lower breast rufous brown, vermiculated with black. Total length about 12 inches, wing 7·5, culmen 1·1, tarsus 2·4.

This species has a white throat like *N. julius* ; the upper parts are not so broadly banded as in that species, resembling in this respect the new species from Antioquia described further on.

Hab. Said to be Chili, which is extremely doubtful.

a. Ad. st.	Chili ?	Purchased. (Type of species.)

3. Nothocercus bonapartei.

Tinamus bonapartei, *G. R. Gr. List Gallinæ Brit. Mus.* p. 97 (Aragua, Venezuela) (1867) ; *id. Hand-list,* iii. p. 3, n. 9862 (1871) ; *Gieb. Thes. Orn.* iii. p. 635 (1877).

Nothocercus bonapartii, *Sclat. & Salv. Nom. Av. Neotrop.* p. 152 (part., Venezuela and Colombia) (1873) ; ? *Tacz. & Berl. P. Z. S.* 1885, p. 112 (Machay, Ecuador).

Tinamus nigricapillus, *Schleg.* (*nec G. R. Gr.*) *Mus. P.-B.,* Tinami, p. 17 (part., Bogota) (1880).

Type. "Top and behind the head slaty black ; mentum pale rufous ; cheeks, sides and lower part of neck rufous, with transverse bands of black ; upper surface rufous olivaceous, with vermiculations and blotches of black, varied with spots of yellowish white, especially on the lower part of back, wings, and upper tail-coverts ; breast rusty colour, with some black undulations ; sides of abdomen, thighs, and under tail-coverts rufous olivaceous, varied with black and rufous-white blotches. Length 16·6 inches, wing 6·7, tarsus 2·9." (*Gray.*)

In Gray's description the colour of the quills, which is most characteristic in the species of this genus, is not mentioned ; but Mr. Sharpe, who at my request has re-examined the type after my departure from London, writes to me as follows :—"The inner webs of the primaries are greyish, freckled with rufous bars ; they are about the same colour above and below ; the greater under wing-

coverts are dusky brown like the quill-lining, with a few rufescent bars towards the ends, so that they resemble the lining of the quills; they may be called grey with rufous bars, but I should consider the colour greyish brown; certainly they are *not* rufous with grey bars."

In the Bogota birds the primaries have the outer webs barred with rufous and brown, while *the inner webs are rufous, with narrow undulated greyish-brown bars*; the secondaries outwardly are almost regularly barred with broader brown bars and narrower rufous ones, between them there are obsolete narrow blackish bars; the under wing-coverts are rufous with crescentic greyish-brown bars; the greater ones or last row have pale rufous and grey bars.

Some specimens are thickly dotted with reddish white on the upper parts and wings.

In the Bogota specimens there is also a good deal of variation in the rufous colour of the underparts, in some specimens deep chestnut, in others clear rufous.

The Bogota birds differ from the type in having the inner web of the primaries *distinctly rufous*, freckled with greyish bars, and the greater under wing-coverts dusky grey, regularly barred with rufous from the base and not only at the tip. Possibly when a larger series is available it will be found convenient to separate specifically the Bogota birds from those from Venezuela. Also the birds from Ecuador, which by Taczanowski and Berlepsch are said to be somewhat different, require comparison.

Young (from the interior of New Granada). Similar to the adult (specim. *d*) in colouring, but the black feathers of the head sprinkled with white dots; throat paler reddish white.

Hab. Venezuela, and, if the same, also Bogota and Ecuador.

a. Ad. st.	Valley of Aragua, Venezuela.	Dyson Coll. (Type of species.)
b, *c*. Ad. et juv. sk.	Interior of New Granada (*Trübner*).	Salvin-Godman Coll.
d. Ad. sk.	New Granada (*Verreaux Coll.*)	Salvin-Godman Coll.

4. Nothocercus frantzii.

Tinamus frantzii, *Lawr. Ann. Lyc. N. Y.* ix. p. 140 (Cervantes, Costa Rica) (1868); *Frantz. J. f. O.* 1869, p. 374; *G. R. Gr. Hand-list*, iii. p. 4, n. 9868 (1871); *Salvin, Ibis*, 1874, p. 312 (= T. bonapartei).

Nothocercus bonapartii, part., *Sclat. & Salv. Nom. Av. Neotrop.* p. 152 (Costa Rica) (1873); *Boucard* (*nec G. R. Gr.*), *P. Z. S.* 1878, p. 41 (Rio Navarro, Costa Rica); *Zeled. Cat. Av. Costa Rica*, p. 29 (1882); *id. Pr. U.S. Nat. Mus.* 1885, p. 112 (Costa Rica); *id. An. Mus. Nac. Costa Rica*, 1887, p. 128, n. 610.

Tinamus nigricapillus, part., *Schleg.* (*nec G. R. Gr.*) *Mus. P.-B.*, Tinami, pp. 17, 18, specim. 3 (Costa Rica) (1880).

Similar to *N. bonapartei*, but the colouring of the upper parts and wings less rufous chestnut and more olive-brown; quills less rufous

and more greyish brown; under surface of the quills less rufous, being greyish, freckled with pale rufous bars, not rufous freckled with grey bars; under wing-coverts also more greyish, barred with rufous, the last row or greater *under wing-coverts uniform grey* with no barrings whatever: "upper mandible black, the lower dusky yellowish; tarsi and toes fleshy dark brown" (*Frantzius, fide Lawrence*). Total length 15 inches, wing 8·5–9·15, tail 2·50, culmen 2·20–2·25, tarsus 2·70.

Hab. Costa Rica.

a. Ad. sk.	Panama.	Salvin-Godman Coll.
b. Ad. sk.	Irazu, Costa Rica (*H. Rogers*).	Salvin-Godman Coll.
c. Ad. sk.	Costa Rica (*D. G. Elliot*).	Salvin-Godman Coll. (Compared with type.)
d. Ad. sk.	Costa Rica.	Purchased.

5. Nothocercus intercedens.

Nothocercus bonapartii, *Sclat. & Salv. P. Z. S.* 1879, p. 548 (Concordia, Frontino in Antioquia).

? Tinamus nigricapillus, part., *Schleg.* (*nec G. R. Gr.*) *Mus. P.-B.*, Tinami, p. 18, specim. 2 (Medellin) (1880).

Adult male. Upper part and sides of the head with the occiput black; throat whitish, washed with rufescent; lower neck and upper parts rufous brown, waved with black lines; breast and abdomen rufescent ochreous brown, almost uniform along the central part, but the upper part of the breast distinctly waved with black lines; sides and flanks olive-brown, waved with black lines; centre of the lower abdomen lighter, with narrow blackish bars and whitish dots; thighs olive-brown, barred with black; under tail-coverts olive-brown waved with black; upper wing-coverts like the back, but the greater ones with some whitish dots; quills, in the closed wings, olive-brown with irregular black bars and others rufescent; primaries with rufous and blackish irregular bars on the outer web, on the inner web more rufescent grey, freckled or irregularly barred with blackish; under aspect of the quills barred with greyish brown and dull reddish; under wing-coverts barred with greyish brown and rufescent, the greater or last row much lighter, with greyish and dull or pale rufescent bars; tail waved with olive-brown and blackish: "iris dark" (*Salmon*): upper mandible dusky, lower mandible pale; feet olive-brown in the dry skin. Total length about 16 inches, wing 8·75, tail 2·60, culmen 1·25, tarsus 1·70.

Another specimen, also marked *male*, differs in having the lower back and upper tail-coverts conspicuously spotted with white; the wings with many more whitish or buff spots, the rufous bars on the quills broader; the abdomen and thighs are also conspicuously spotted with white; the barrings on the under surface of the quills are broader.

This species is easily distinguished from *N. bonapartei* and *N. frantzii* by the whitish throat, only washed with rufescent; besides

it has the neck darker than both the other species: on the upper parts it is more like *N. frantzii*, and in the greater or last row of lower under wing-coverts being barred it resembles *N. bonapartei*—in fact is intermediate between the two.

Hab. Antioquia, U.S. of Colombia.

a. ♂ ad. sk.	Frontino, U.S. of Colombia (*T. K. Salmon*).	Salvin-Godman Coll. (Type of species.)
b, *c.* ♂ ad. sk.	Concordia, U.S. of Colombia (*T. K. Salmon*).	Salvin-Godman Coll.

3. CRYPTURUS.

	Type.
Crypturus, *Illig. Prodr. Mamm. et Av.* p. 244 (1811) ..	C. cinereus.

Range. From Northern Mexico to Peru and the Argentine Republic.

Key to the Species *.

I. Upper parts not barred, neither distinctly vermiculated, but nearly uniform, both in males and females adult.

a. General colour nearly uniform greyish brown; only the upper part of the head and nape rufous brown ..... *cinereus*, p. 517.

b. Head greyish brown or even blackish above, not uniform with the body, which is more or less rufous brown.

a'. Breast more or less rufous chestnut.

a''. Throat grey.

a'''. Hind neck rufous chestnut like the back.

a^4. Breast, abdomen, and back nearly uniform bright rufous chestnut. *castaneus*, p. 521.

b^4. Breast and back rufous chestnut, abdomen greyish ..... *griseiventris*, p. 521.

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* I am not acquainted with the following species:—

Crypturus rubripes.

Crypturus rubripes, *Tacz. Orn. du Pérou*, iii. p. 303 (Lechugal) (1886).

"*C.* supra obsolete rubente-brunneus, pileo obscuriore, superciliis latis genisque isabellinis; gula pectoreque medio pure albis, collo antico griseo, abdomine medio pallido isabellino, lateribus ventris fasciis brunneis; subcaudalibus basi rufescentibus, disco et fascia undulata nigris; alis griseo-brunneis; tectricibus majoribus, mediis et minoribus proximis apice albido marginatis; rectricibus basi cinereis, apice dorso concoloribus.

♂. Sommet de la tête d'un fuligineux brunâtre, à plumes du front et du vertex passant au noirâtre à l'extrémité, bordé des deux côtés d'une large bande sourcilière isabelle, sale et moins prononcée devant l'œil; joues de la couleur du sourcil jusqu'au bord postérieur de l'œil; le reste des côtés de la tête gris-brunâtre; cou postérieur, dos, scapulaires et croupion d'un brun rougeâtre pâle tirant au violet, à plumes du milieu du dos et quelques-unes des scapulaires postérieures frangées de noirâtre d'une manière peu prononcée; en dessous la gorge est longuement et largement blanche; tout le devant du cou gris, tirant

b'''. Hind neck greyish brown, not chestnut like the back.
*c*⁴. Back rufous brown: larger, tarsus 1·9 inch ..... *obsoletus*, p. 519.
*d*⁴. Back and wings olive-brown: smaller, tarsus 1·6 ..... *cerviniventris*, p. 520.
b''. Throat whitish, sometimes washed with rufous or grey, but never decidedly rufous or grey; size smaller, wing 5·4 inches; general colour very variable, bright rufous, rufous-brown, olive-brown, or even olive, but lower parts clearer along the middle, bright rufous or pale ochreous fulvous ..... *pileatus*, p. 522.
b'. Breast greyish, with no rufous tinge; back and wings chestnut; head grey.
c''. Larger: culmen 0·90–0·95 ..... *tataupa*, p. 525.
d''. Smaller: culmen 0·65–0·70..... *parvirostris*, p. 526.
II. Upper parts, especially the upper wing-coverts, more or less distinctly vermiculated, or, if barred, with indistinct very pale bars.
c. Black vermiculations nearly confined to the upper wing-coverts and outer web of secondaries; back nearly uniform; upper part of head and nape slaty black; throat dark ashy ..... *boucardi* ♂, p. 544.
d. Dusky vermiculations confined to the upper wing-coverts and changing into black and rufescent or rufous-grey bars on the back.
c'. Upper part of the head entirely black; the primaries very dark greyish brown, nearly black ..... *undulatus*, p. 527.
d'. Upper part of the head blackish brown anteriorly; primaries pale greyish brown ..... *scolopax* ♂, p. 528.

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un peu au violâtre surtout sur les côtés, les plumes de la région jugulaire vermiculées dans leur partie terminale de plus foncé d'une manière assez distincte; poitrine blanche sur le milieu et grise sur les côtés; abdomen isabelle, avec des raies brunes peu nombreuses sur les côtés du bas-ventre; sous-caudales rousses à la base, isabelle à l'extrémité, à disque noir et une raie transversale festonnée. Ailes brun grisâtres, à tectrices grandes, médianes et petites voisines bordées à l'extrémité de blanchâtre, ces bordures précédées d'une raie ou tache brune; les rémiges secondaires bordées à l'extérieur d'une série de taches fauves irrégulières et terminées d'une pareille bordure sur la barbe externe; sous-alaires blanchâtres au milieu de l'aile et brunes le long du bord; les grandes tectrices et la page inférieure des rémiges d'un cendré perlé clair. Rectrices cendrées à la base, de la couleur du dos à l'extrémité, variées aux bords de quelques taches fauves. Mâchoire brune, mandibule jaunâtre pâle; pattes rouges. Longueur de l'aile 162, queue 42, bec 37, tarsus 46, doigt médian avec l'ongle 35 millimètres." (*Taczanowski.*)

Hab. Lechugal, Peru.

The type of this species, collected by Jelski, belongs to the Raimondi collection, in the Lima Museum.

This species seems allied to *C. strigulosus* and *C. erythropus*.

e. Dusky vermiculations all over the back.

e'. Breast whitish or greyish, with no distinct rufous tinge; throat whitish or whitish grey.

e''. Neck distinctly rufescent, with brown bars, very conspicuous also in front ..... *scolopax* ♀, p. 528.

f''. Neck not distinctly rufescent, neither distinctly barred.

e'''. Flanks rufescent, more or less distinctly barred with brown.

*e*⁴. Flanks, if barred, with a few brown bars; rump and upper tail-coverts greyish olive like the back and similarly freckled with dusky lines ..... *adspersus*, p. 529

*f*⁴. Flanks with narrow dusky bars; rump and upper tail-coverts greyish rufous brown, with nearly regular narrow black bars ..... *occidentalis* ♂, p. 546.

d'''. Flanks with no distinct rufous tinge.

*g*⁴. Sides of the head greyish, also the upper tail-coverts greyish or olive-grey, different from the olive-brown back ..... *simplex*, p. 531.

*h*⁴. Sides of the head dark brown; upper tail-coverts olive-brown, nearly uniform with the back ..... *balstoni*, p. 531.

f'. Breast rufous.

g''. Throat rufous; breast bright rufous.

e'''. Hind neck brown-black; post-ocular superciliary stripe rufous .. *atricapillus*, p. 532.

f'''. Hind neck rufous brown, freckled with dusky bars; no superciliary stripe ..... *garleppi*, p. 533.

h''. Throat pure white; breast pale rufous ..... *mexicanus* ♂, p. 545.

III. Upper parts not strongly barred, neither distinctly vermiculated, but upper tail-coverts with black bars more or less distinct, and quite distinct whitish-buff bars.

f. Sides of the head with lores bright rufous cinnamon.

g'. Middle of the breast and abdomen white; throat rufescent ..... *strigulosus*, p. 533.

h'. Breast and abdomen rufescent; throat white ..... *erythropus*, p. 534.

g. Sides of the head rufescent, not cinnamon on the lores; nape rufous vinous; lower fore neck and upper breast grey; lower breast rufescent ..... *dissimilis*, p. 541.

IV. Upper parts, especially the wings, strongly barred.
h. Lower parts partly rufescent.
i'. Neck all round bright rufous chestnut.
i''. Upper part of the head black.
g'''. Feathers of the back and rump and upper wing-coverts with more than one rufous bar, and with the black tips rather narrow .... *variegatus*, p. 535.
h'''. Feathers of the back and rump and upper wing-coverts with only one rufous bar, and the black tips rather broad..... *salvini*, p. 537.
k''. Upper part of the head rusty red (*Von Pelzeln*) ..... *brevirostris*, p. 538.
k'. Neck all round not entirely rufous chestnut.
l''. Nape brown, with no rufous tinge; breast pale ochreous ..... *bartletti*, p. 538.
m''. Nape rufous, with a vinous tinge.
i'''. Lower fore neck and upper breast grey.
*i*⁴. A broad superciliary stripe rufescent ..... *noctivagus*, p. 539.
*k*⁴. No distinct superciliary stripe .. *dissimilis* ♀, p. 541.
k'''. Lower fore neck and breast rufescent; seldom a grey tinge on the former.
*l*⁴. Tarsus longer, 2·05 inches; tail regularly barred across ..... *cinnamomeus*, p. 541.
*m*⁴. Tarsus shorter, 1·8–1·9; tail barred only on the inner web of the feathers ..... *mexicanus* ♀, p. 545.
n''. Nape brown; lower neck and breast dark grey ..... *boucardi* ♀, p. 544.
o''. Nape rufous brown; lower fore neck and breast greyish brown, washed with ochreous olive ..... *columbianus*, p. 545.
i. Lower parts whitish, with no rufescent tinge ..... *transfasciatus*, p. 546.

1. Crypturus cinereus.

Tinamou cendré, *Buff. Hist. Nat. Ois.* iv. p. 510 (Cayenne) (1778).
Cinereous Tinamou, *Lath. Syn.* ii. 2, p. 726, n. 2 (1783).
Tetrao cinereus, *Gm. S. N.* i. 2, p. 768, n. 64 (1788).
Tinamus cinereus, *Lath. Ind. Orn.* ii. p. 633, n. 2 (1790); *Temm. Pig. et Gallin.* iii. pp. 574, 750 (1815); *Steph. Gen. Zool.* xi. 2, p. 412 (1819); *Temm. Pl. Col., genre* Tinamou, sp. 8 (1826); *Less. Tr. d'Orn.* p. 512 (1831); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839); *G. R. Gr. Gen. B.* iii. p. 524, n. 6 (1844); *id. List B. Brit. Mus.* iii. p. 52 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 285. f. 1564 (1848); *G. R. Gr. List Gallinæ Brit. Mus.* p. 98 (Cayenne) (1867); *Pelz. Orn. Bras.* pp. 292, 453, lv (1871); *Gieb. Thes. Orn.* iii. p. 636 (1877).
Tinamus cinerea, *Bonn. Enc. Méth.* i. p. 225, n. 2 (1791).

Crypturus cinereus, *Illig. Prodr. Mamm. et Av.* p. 245 (1811); *Wagl. Syst. Av., gen.* Crypturus, sp. 5 (1827); *id. Isis*, 1829, p. 746 (Surinam); *Tsch. Arch. f. Naturg.* 1844, i. p. 307, n. 279 (Peru); *id. Faun. Per., Aves*, p. 46, n. 4, p. 283 (1846); *Thienem. Fortpflanz.* p. 23, t. v. f. 3 (egg) (1845); *Licht. Nom. Av.* p. 87 (Brazil) (1854); *Burm. Th. Bras.* iii. p. 317 (1856); *Bp. Compt. Rend.* xlii. p. 881, n. 319 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 317 (1856); *G. R. Gr. Hand-list*, iii. p. 4, n. 9869 (1871); *Sclat. & Salv. P. Z. S.* 1873, p. 310 (Chamicuros and Santa Cruz); *id. Nomencl. Av. Neotrop.* p. 152 (Guiana et Amazonia) (1873); *Schleg. Mus. P.-B.*, Tinami, p. 20 (1880); *Tacz. Orn. Pér.* iii. p. 300, *Tables*, p. 107 (1886); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Surinam) (1890).

Cryptura cinerea, *Vieill. N. D.* xxxiv. p. 102 (1819).

? Tinamus cæruleus, "*Lath.*," *Less. Man.* ii. p. 206 (1828).

? Crypturus megapodius, *Bp. Compt. Rend.* xlii. p. 954 (Cayenne?) (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 318, p. 16 (1856); *G. R. Gr. Hand-list*, iii. p. 4, n. 9876 (1871).

Tinamus megapodius, *G. R. Gr. List Gallinæ Br. Mus.* p. 101, n. 28 (1867); *Gieb. Thes. Orn.* iii. p. 636 (1877).

[Crypturus] assimilis, *Mus. Vindob., fide Schleg. Mus. P.-B.*, Tinami, p. 20 (pale variety) (1880).

Adult. Greyish brown, nearly uniform, only the upper part of the head, ear-coverts, and nape tinged with rufous brown; throat greyish; shafts of the feathers of the sides of the head and throat white; under tail-coverts with obsolete dusky and rufous bars: "bill brown horn-colour (in dry skin whitish underneath); feet yellowish brown; irides light hazel" (*Whitely*). Total length 12·5 inches, wing 7–7·4, tail 2, culmen 1, tarsus 2–2·2.

Female. Somewhat larger than the male.

Young. "Upper parts dark smoky brown, lower parts paler, with the feathers slightly edged with fulvous; abdomen with a few narrow fulvous bars; throat pale grey; the outer web of the secondaries edged with triangular reddish spots; under tail-coverts with some reddish spots" (*Taczanowski*).

Some specimens have the under tail-coverts with broad crescentic subapical black bars.

I have not seen Brazilian birds collected by Natterer, which, according to von Pelzeln, are lighter and more reddish; Schlegel adds that this paler race bears the name of *assimilis* in the Vienna Museum. Probably Bonaparte bestowed the name *Crypturus megapodius* on the dark variety; Dr. Oustalet writes to me that the type specimen, mentioned by Bonaparte, is no longer in the Paris Museum.

Hab. Northern S. America, from Guiana to Rio Madeira and Eastern Peru on the Upper Amazons.

a. Ad. st.	Cayenne.	M. Cuoy Coll.
b. Ad. st.	S. America (Cayenne).	Old Coll.
c, *d*. ♂ ♀ ad. sk.	Takutu River, Brit. Guiana, March, April (*H. Whitely*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Yquitos, Upper Amazons, Oct. (*H. Whitely*).	Salvin-Godman Coll.

f, g. ♀ ad. sk.	Santa Cruz, on the Huallaga River, E. Peru, Sept. (*E. Bartlett*).	Salvin-Godman Coll.

2. Crypturus obsoletus.

Inambú azulado, *Azar. Apunt.* iii. p. 52, n. 330 (1805).

Tinamus obsoletus, *Temm. Pig. et Gallin.* iii. pp. 588, 751 (Brazil and Paraguay) (1815); *Steph. Gen. Zool.* xi. 2, p. 413 (1819); *Temm. Pl. Col.* 196 (1823); *Steph. Gen. Zool.* xiv. p. 307 (1826); *Temm. Pl. Col., genre* Tinamou, sp. 12 (1826); *Less. Man.* ii. p. 207 (1828); *id. Tr. d'Orn.* p. 513 (1831); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839); *G. R. Gr. Gen. B.* iii. p. 524, n. 12 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 285. ff. 1568–69 (1848); *G. R. Gr. List Gallinæ Brit. Mus.* p. 99 (part., Brazil and Bolivia) (1867); *Reinh. Vid. Med. naturh. Foren.* 1870, p. 48 (Lagoa dos Pitos, Sumidouro, Lagoa Santa); *Pelz. Orn. Bras.* pp. 292, 453, lv (Mattodentro, Ypanema, Itararé) (1871); *Gieb. Thes. Orn.* iii. p. 637 (1877).

Cryptura cærulescens, *Vieill. N. D.* xxxiv. p. 101 (1819) (*ex Azara*).

Tinamus cærulescens, *Vieill. Enc. Méth.* i. p. 372 (1820).

Crypturus obsoletus, *Licht. Verz. Doubl.* p. 68, n. 703 (San Paulo) (1823); *Wagl. Syst. Av., gen.* Crypturus, sp. 11 (1827); *Tsch. Arch. f. Naturg.* 1844, i. p. 307, n. 280 (Peru); *Thienem. Fortpflanz.* t. v. f. 7 (egg) (1845); *Tsch. Faun. Per., Aves*, p. 46, n. 5 (1846); *Licht. Nom. Av.* p. 87 (1854); *Bp. Compt. Rend.* xliii. p. 881, n. 325 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 322 (1856); *Burm. Th. Bras.* iii. p. 316 (Neu-Freiburg) (1856); *Euler, J. f. O.* 1867, p. 418 (egg); *G. R. Gr. Hand-list*, iii. p. 4, n. 9872 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 152 (Brazil and Paraguay) (1873); ? *Tacz. P. Z. S.* 1874, p. 563 (Monterico); *Cab. J. f. O.* 1874, p. 230; *Sorby, P. Z. S.* 1875, p. 361 (egg); *Sclat. & Salv. P. Z. S.* 1879, p. 642 (Tilotilo, Bolivia); *Schleg. Mus. P.-B.*, Tinami, p. 22 (Brazil and New Granada?) (1880); *Taez. P. Z. S.* 1882, p. 49 (Chirimoto, N.E. Peru); *Salv. Cat. B. Strickl. Coll.* p. 640, n. 3112 (1882); *Sclat. List Vert. An.* 8th ed. p. 545 (Zool. Gard.) (1883); *Berl. u. Jher. Zeitschr. ges. Orn.* 1885, p. 184 (Taquara do Mundo Novo); *Tacz. Orn. Pér.* iii. p. 296, *Tables*, p. 106 (1886); *Berl. J. f. O.* 1887, p. 126, n. 350; *Sclat. & Huds. Argent. Orn.* ii. p. 207 (1889); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 303 (Rio Graude and Montevideo) (1890); *Hartert, Kat. Vogelsamml.* p. 206, n. 3096 (1891).

Tinamus rufus, *Mus. Paris fide Less. Tr. d'Orn.* p. 513 (1831).

Crypturus variegatus?, *Burm.* (*nec Gm.*) *J. f. O.* 1853, p. 176 (egg).

Crypturus obscurus, "*Licht.*" (errore), *Gieb. Thes. Orn.* iii. p. 637 (1877); *Tacz. Orn. Pér.* iii. p. 296 (1886) (*in syn.* C. obsoleti).

? Crypturus cinereus, *White* (*nec Gm.*), *P. Z. S.* 1882, p. 629 (Salta).

Adult male. Head and upper neck dusky grey, throat paler ash-grey; lower hind neck brown; upper parts rufous brown, slightly vermiculated with dusky; lower parts rufous chestnut, abdomen paler; feathers of the lower flanks and abdomen with crescentic brown bars, producing a scale-like appearance; under tail-coverts deep brown, variegated and edged with ochreous rufescent; primaries and under wing-coverts greyish, the greater under wing-coverts paler grey; tail rufous brown: "bill reddish brown; iris

orange; feet pale brown, or of a dead-leaf colour" (*Azara*); "bill coral-red" (*Vieillot*); "iris brown, ochreous, red, or red-brown" (*Jhering*); "feet greenish flesh-brown colour like the upper mandible" (*Burmeister*). Total length about 10·5 inches, wing 6·5, culmen 0·95, tarsus 1·9.

Female. Similar to the male, only paler on the abdomen.

The larger specimens have the upper part of the head and nape much darker, nearly black.

A *young* bird, apparently belonging to this species (Forest of Itaborari, on the Rio Macocou, *Mus. Turin*), is duller, has the throat paler greyish, the upper parts finely vermiculated and with a few blackish and whitish buff dots, and the lower fore neck and the breast distinctly barred with brown.

Taczanowski mentions two Peruvian races, both differing from the Brazilian birds in having a darker grey throat and the bill much smaller, and he gives the following diagnoses of them:—

First race (Central Peru). Upper parts darker and less rufescent, middle of the abdomen broadly fulvous and paler, distinctly different from the colour of the flanks, where the dark bars are less distinct; the smoky-grey colour of the sides of the head distinctly washed with reddish; iris orange.

Second race (Northern Peru). Upper parts paler and more rufescent, abdomen brighter; iris brown.

Hab. Paraguay, Argentine, Brazil, and, if the same species, Colombia and also Peru. The Colombian birds mentioned by Schlegel probably belong to *C. castaneus*.

a. Ad. st.	Brazil.	Zool. Soc.
b. Ad. sk.	Brazil.	M. Claussen [P.].
c, *d*. ♂ ♀ ad. st.	Brazil (*Verreaux Coll.*).	Purchased.
e. Ad. sk.	Brazil? (*Boucard Coll.*).	Salvin-Godman Coll.
f, *g*, *h*. ♂ ♀ ad. sk.	Rio de Janeiro.	Alex. Fry, Esq. [P.].
i. Ad. sk.	Rio Paraná, Brazil (*Rogers*).	Salvin-Godman Coll.
k. Ad. sk.	Tilotilo, Prov. Yungas, Bolivia (*C. Buckley*).	Salvin-Godman Coll.
	Pale greyish variety (?).	
l. ♂ ad. st.	Bolivia.	T. Bridges, Esq. [P.].

3. Crypturus cerviniventris.

Crypturus cerviniventris, *Sclat. & Salv. P. Z. S.* 1873, p. 512 (Venezuela); *iid. Nomencl. Av. Neotrop.* p. 152, n. 6 (1873); *Spence, Land of Bolivar*, i. fig. p. 267 (1878).
Tinamus cerviniventris, *Gieb. Thes. Orn.* iii. p. 635 (1877).

Adult (type). Very similar to *C. obsoletus*, but much paler and smaller; head, nape, and throat dull grey, the upper part of the head darker, dusky grey; hind lower neck and upper parts reddish olive, with traces of obsolete vermiculations; lower fore neck and lower parts pale rufous, paler still on the abdomen; flanks and abdomen with dull brown bars, the tips of the feathers pale

rufescent or buff; under tail-coverts rufous buff, strongly barred with black, the tips rufous buff; primaries greyish brown, secondaries olive-brown vermiculated or dotted with dusky; marginal under wing-coverts brown-grey, the last row grey dusted with brown, central ones whitish grey; tail olive-brown, the lateral feathers edged with whitish buff, and with a black line inside the pale edge: bill dusky, lower mandible pale; feet horn-brown. Total length about 10 inches, wing 6·4, tail 1·8, culmen 0·9, tarsus 1·6.

Hab. Venezuela.

a. Ad. sk.	Venezuela (*Spence*).	Salvin-Godman Coll.	(Type of species.)

4. Crypturus griseiventris.

Similar to *C. obsoletus* and *C. castaneus*, and intermediate between the two. Differs from *C. obsoletus* in having the hind lower neck rufous chestnut, like *C. castaneus*, and the upper parts of a much brighter rufous chestnut, nearly as in *C. castaneus*; sides of the head posteriorly tinged with rufous; lower breast and abdomen dull greyish with obsolete crescentic brown bars; under tail-coverts as in *C. obsoletus*; tail rufous chestnut like the back; feet olive; toes much shorter than in either *C. obsoletus* or *C. castaneus*. Total length about 12 inches, wing 6·5, tail 2, culmen 0·9, tarsus 1·62, middle toe without claw 0·92.

Hab. Santarem on the Amazons, Brazil.

a, b. Imm. or moulting, sk.	Santarem, Amazons (*H. Wickham*).	Salvin-Godman Coll.	(Types of species.)

5. Crypturus castaneus. (Plate IX.)

Tinamus castaneus, *Sclat. P. Z. S.* 1857, p. 277 (Bogota); *Gieb. Thes. Orn.* iii. p. 635 (1877).

Tinamus obsoletus, part., *G. R. Gr. List Gallinæ Brit. Mus.* p. 99 (1867).

Crypturus castaneus, *G. R. Gr. Hand-list*, iii. p. 4, n. 9881 (1871); *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 152, n. 3 (1873).

Adult (type). Similar to *C. obsoletus*, but of a much brighter chestnut both above and below, and also on the lower part of the hind neck; scarcely any trace of vermiculations on the back; upper part of the head and nape smoky black; forehead and sides of the head dark grey; throat paler grey; feathers of the abdomen and flanks brown, with ochreous-buff apical bars; under tail-coverts ochreous buff, centred with brown, some variegated with brown on the outer webs; quills dark greyish brown, tertials tinged with chestnut; upper wing-coverts chestnut like the back, but the hidden base brown; under wing-coverts greyish brown, the last row pale grey like the under surface of the quills; tail brown: upper mandible black, the lower whitish; feet in dry skin reddish brown. Total

length about 10 inches (the dry skin only 8·5), wing 6, tail about 2, culmen 0·9, tarsus 1·9.

Only known from the type specimen.

Hab. Bogota (New Granada).

a. Ad. sk.	Bogota.	Sclater Coll. (Type of species.)

6. Crypturus pileatus.

Soui ou Pétit Tinamou de Cayenne, *D'Aubent. Pl. Enl.* 829.

Soui, *Buff. Hist. Nat. Ois.* iv. p. 512 (1778).

Tetrao pileatus, *Bodd. Tabl. Pl. Enl.* p. 51, n. 829 (1783).

Little Tinamou, *Lath. Syn.* ii. 2, p. 727, n. 4 (1783).

Tetrao sovi, *Gm. S. N.* i. 2, p. 768, n. 66 (1788).

Tinamus soui, *Lath. Ind. Orn.* ii. p. 634, n. 4 (1790); *Bonn. Enc. Méth.* i. p. 225, pl. 90. f. 2 (1791); *Temm. Pig. et Gallin.* iii. pp. 597, 752 (1815); *Steph. Gen. Zool.* xi. 2, p. 418 (1819); *Temm. Pl. Col., genre* Tinamou, sp. 15 (1826); *Less. Man.* ii. p. 207 (1828); *id. Tr. d'Orn.* p. 512 (1831); *id. Compl. de Buff.* 2nd ed., *Ois.* p. 240 (1838); *Temm. Pl. Col.* i., *Tabl. Méth.* p. 87 (1839).

Cryptura soui, *Vieill. N. D.* xxxiv. p. 107 (1819).

Crypturus sovi, *Licht. Verz. Doubl.* p. 68, n. 705 (Bahia) (1823); *Wagl. Syst. Av., gen.* Crypturus, sp. 10 (1827); *Thienem. Fortpflanz.* p. 25, tab. v. f. 9 (1845); *Cab. in Schomb. Reis. Brit. Guian.* iii. p. 748 (1848); *Licht. Nom. Av.* p. 87 (1854); *Bp. Compt. Rend.* xlii. p. 881, n. 328 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 327, p. 19 (1856); *Burm. Th. Bras.* iii. p. 316 (1856).

Tinamus sovi, *Wied, Beitr.* iv. p. 522 (Rio Belmonte) (1832); *Hartl. Syst. Verz. Ges. Mus.* p. 105 (1844); *G. R. Gr. Gen. B.* iii. p. 524, n. 11 (1844); *Léot. Ois. Trinid.* p. 385 (1866); *Gieb. Thes. Orn.* iii. p. 637 (1877).

Tinamus pileatus, *G. R. Gr. List B. Brit. Mus.* iii. p. 53 (1844); *id. Gen. B.*, Append. p. 25 (1849); *Lawr. Ann. Lyc. N. Y.* vii. p. 334 (Panama) (1862); *G. R. Gr. List Gallinæ Br. Mus.* p. 99, n. 13 (1867); *Pelz. Orn. Bras.* pp. 294, 458, lvi (1871).

Tinamus parvirostris, *G. R. Gr.* (*nec Wagl.*) *List B. Brit. Mus.* iii. p. 53 (1844); *id. List Gallinæ Brit. Mus.* p. 99 (1867); *Sclat. & Salv. P. Z. S.* 1867, p. 754 (Chyavetas).

Tinamus meserythrus, *Sclat. P. Z. S.* 1859, p. 392; *Salv. Ibis*, 1861, p. 356 (egg, Central America); *Sclat. & Salv. P. Z. S.* 1864, p. 371 (Panama); *G. R. Gr. List Gallinæ Br. Mus.* p. 99, n. 15 (1867); *Pelz. Orn. Bras.* p. 294 (note) (1871); *Gieb. Thes. Orn.* iii. p. 636 (1877); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 51 (1888).

? Tinamus sp., *Sclat. P. Z. S.* 1860, p. 289 (Babahoyo, Ecuador).

Crypturus meserythrus, *Sclat. & Salv. Exot. Orn.* p. 93, pl. xlvii. (1868); *Salv. P. Z. S.* 1870, p. 218 (Veragua); *G. R. Gr. Hand-list*, iii. p. 4, n. 9875 (1871); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Mexico) (1890).

Crypturus modestus, *Cab. J. f. O.* 1869, p. 212 (Costa Rica); *Frantz. ibid.* p. 374; *G. R. Gr. Hand-list*, iii. p. 4, n. 9877 (1871).

Crypturus pileatus, *G. R. Gr. Hand-list*, iii. p. 4, n. 9873 (1871); *Layard, Ibis*, 1873, p. 396 (Pará); *Sclat. & Salv. P. Z. S.* 1873, p. 310 (Chyavetas); *iid. Nom. Av. Neotrop.* p. 152, n. 4 (Mexico, Am. Centr., et Amer. merid. ad Brasilia) (1873); *Cab. J. f. O.* 1874, p. 230; *Sorby, P. Z. S.* 1875, p. 361; *Sclat. & Salv. P. Z. S.*

1879, p. 548 (Cauca, Antioquia); *Schleg. Mus. P.-B.*, Tinami, p. 24 (1880); *Zeledon, Cat. Av. Costa Rica*, p. 29 (1882); *Nutting, Pr. U.S. Nat. Mus.* v. p. 409 (1882) (Costa Rica); *Sclat. List Vert. An.* 8th ed. p. 545 (Zool. Gard.) (1883); *Tacz. & Berl. P. Z. S.* 1885, p. 113 (Yaguachi, Ecuador) *; *Zeled. Pr. U.S. Nat. Mus.* 1885, p. 112 (Costa Rica); *Salv. Ibis*, 1886, p. 181 (Brit. Guiana); *Zeled. An. Mus. Nac. Rep. Costa Rica*, 1887, p. 128; *Allen, Bull. Amer. Mus. N. H.* ii. p. 112 (Bolivia) (1889); *Tristr. Cat. Coll. B.* p. 2 (Demerara) (1889); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Guiana) (1890); *Hartert, Kat. Vogelsamml.* p. 206, n. 3097 (1891); *Richm. Pr. U.S. Nat. Mus.* xvi. p. 525 (Nicaragua) (1893); *Chapm. Bull. Amer. Mus. N. H.* vi. p. 85 (Trinidad) (1894).

Tinamus modestus, *Gieb. Thes. Orn.* iii. p. 637 (1877).

Crypturus pileatus meserythrus, *Schleg. Mus. P.-B.*, Tinami, p. 25 (1880).

Crypturus sp. ?, *Tacz. & Berl. P. Z. S.* 1883, p. 577 (Chimbo).

Crypturus sp., *Tacz. & Berl. P. Z. S.* 1885, p. 120 (Babahoyo and Esmeraldas, *Fraser*).

Crypturus sp. nov., *Tacz. & Berl. l. c.* p. 121.

Crypturus parvirostris, *Tacz.* (*nec Wagl.*) *Orn. Pér.* iii. p. 298 (1886).

Size small; not barred: general colour more or less rufous, rufous brown, olive-brown, or even olive; lower parts clearer; the mesial parts from bright rufous cinnamon to pale ochreous fulvous; sides from chestnut to olive; throat white, sometimes washed with rufous or with grey, but never decidedly rufous or grey; upper part and sides of head and nape blackish or brown, or even greyish; sometimes a bright rufous stripe along the malar region; neck bright chestnut or rufous brown, or even dusky; feathers of the flanks with lighter tips, which produce the appearance of the flanks being obsoletely barred; under tail-coverts fulvous buff, nearly uniform, sometimes centred with black or more or less freckled with brown; upper wing-coverts like the back, quills blackish; under wing-coverts brownish along the edge of the wing, the last row pale grey, the central ones whitish grey: "upper mandible horn-brown, the lower horn-grey, darker towards the tip; feet olive-grey; irides grey" (*Stolzmann*); "irides very light brown" (*McLeannan*). Total length about 9 inches, wing 5·4, tail 1·75, culmen 0·75, tarsus 1·5.

A *young* bird in first plumage from Bartica Grove has the feathers of the upper parts with subapical black spots and pale tips; the upper wing-coverts have pale buff tips, forming two pale alar bars at the tip of the median and greater ones; the lower parts are rufous, with black bar-like marks especially on the flanks.

Immature birds from Roraima have the upper parts olive-brown, the top and sides of head greyish brown; the upper wing-coverts and upper tail-coverts barred at the tip with pale ochreous; lower parts ochreous; throat white.

* Thanks to Mr. Stolzmann, I have examined the specimen from Yaguachi; it is a male and not a female, as stated (*l. c.*), exactly like other specimens from Bibala, Chiriqui.

The variations in this species are so great that it is impossible to give a description which can apply to each specimen, even adult.

The brighter coloured birds are those from Bartica Grove, British Guiana (*d*, *e*), the paler are from Balzar Mountains (*t*, *u*); specimens from Antioquia (*x*) and Nicaragua (*e'*, *f'*) also often have the neck very dark brown in front. Nothwithstanding the large series in the British Museum, we must wait for larger series from each locality to decide whether several races can be recognized. *C. meserythrus*, Sclat., from Mexico, is very little brighter than some specimens from Brazil, and much duller than the Guiana birds; to the Central American dark-necked form, if distinct, the name *C. modestus*, Cab. may be applied.

Hab. Guiana, south to Brazil and Bolivia, west to Peru, Ecuador, Colombia, and Central America, north to Mexico.

a. Ad. sk.	S. America (Guiana).	Old Collection (*Leadbeater*).
b, *c*. ♂ imm. sk.	Roraima, Brit. Guiana, Nov. (*H. Whitely*).	Salvin-Godman Coll.
d, *e*, *f*. ♀ ad. et juv. sk.	Bartica Grove, Brit. Guiana, Oct., Dec., Jan. (*H. Whitely*).	Salvin-Godman Coll.
g. Ad. st.	Brazil.	M. Claussen [P.].
h. Ad. st.	Brazil. (*Tinamus parvirostris*, G. R. Gr. List Gall. p. 91.)	Old Collection.
i. Ad. st.	Brazil?	Dr. J. E. Gray [P.].
k, *l*. Ad. sk.	Brazil.	Salvin-Godman Coll.
m. ♂ ad. sk.	Pará, Brazil, Dec. (*Elliot*).	Tweeddale Coll.
n, *o*. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
p, *q*. Ad. et ♂ imm. sk.	Rio de Janeiro.	Alex. Fry, Esq. [P.].
r. ♂ ad. sk.	Matto Grosso, Brazil, Nov. (*Natterer*).	Salvin-Godman Coll.
s. Ad. sk.	Chyavetas, E. Peru, Aug. (*E. Bartlett*).	Salvin-Godman Coll.
t, *u*. Ad. sk.	Balzar Mts., Ecuador (*Illingworth*).	Salvin-Godman Coll.
v. Ad. sk.	Vicinity of Bogota, New Granada (*G. Crowther*).	Salvin-Godman Coll.
w. ♀ ad. sk.	Pueblo Viejo, Sierra Nevada, Sept. (*F. A. A. Simons*).	Salvin-Godman Coll.
x. ♀ ad. sk.	Cauca, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll.
y. ♂ ad. sk.	Lion Hill, Panama (*McLannan*).	Salvin-Godman Coll.
z. ♂ ad. sk.	Chepo, Isthmus of Panama (*Arcé*).	Salvin-Godman Coll.
a'. ♂ ad. sk.	Chitra, Veragua (*Arcé*).	Salvin-Godman Coll.
b', *c'*. ♂ ♀ ad.? sk.	Bibala, Chiriqui (*Arcé*).	Salvin-Godman Coll.
d'. ♂ ad. sk.	Santa Fé, Veragua (*Arcé*).	Salvin-Godman Coll.
e'. ♀ ad. sk.	Escondido River, Nicaragua, Dec. (*C. W. Richmond*).	Salvin-Godman Coll.
f'. ♀ ad. sk.	Santo Domingo, Chontales, Nicaragua (*W. B. Richardson*).	Salvin-Godman Coll.
g', *h'*. Ad. st.	Guatemala (*O. Salvin*). (*T. meserythrus*, G. R. Gr. List Gall. p. 99.)	O. Salvin, Esq. [P.].

i'-n'. ♀ ad. et ad. sk.	Choctum, Guatemala, Jan. (*O. Salvin*).	Salvin-Godman Coll.
o'. ♀ ad. sk.	Playa Vicente, April 1859. (Type of *Tinamus meserythrus*, Sclat.)	Salvin-Godman Coll.
p'. ♀ ad. sk.	Mexico (*Verreaux*).	Salvin-Godman Coll.

7. Crypturus tataupa.

Tataúpá, *Azar. Apunt.* iii. p. 48, n. 329 (1805).

Tinamus tataupa, *Temm. Pig. et Gallin.* iii. pp. 590, 752 (1815); *Steph. Gen. Zool.* xi. 2, p. 415 (1819); *Vieill. Enc. Méth.* i. p. 371 (1820); *Steph. Gen. Zool.* xiv. 1, p. 307 (1826); *Temm. Pl. Col.* 415, *genre* Tinamou, sp. 13 (1826); *Less. Man.* ii. p. 207 (1828); *id. Tr. d'Orn.* p. 513 (1831); *Wied, Beitr.* iv. p. 515 (1832); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 239 (1838); *Temm. Pl. Col.*, i. *Tabl. Méth.* p. 87 (1839); *G. R. Gr. Gen. B.* iii. p. 524, n. 13 (1844); *id. List B. Brit. Mus.* iii. p. 53 (1844); *Hartl. Ind. Azar.*, Append. p. 21, n. 329 (1847); *Rehnb. Syn. Av.*, Gallinaceæ, tab. 285. ff. 1565–66 (1848) (*ex Temm. & Swains.*); *G. R. Gr. Gen. B.*, Append. p. 25 (1849); *id. List Gallinæ Brit. Mus.* p. 98 (Bolivia) (1867); *Euler, J. f. O.* 1867, pp. 185, 189, 196, 198; *Reink. Vid. Med. naturh. Foren.* 1870, p. 49 (Minas Geraes); *Pelz. Orn. Bras.* pp. 294, 454, lvi (Rio Janeiro, Sapitiba, Mattodentro, Ypanema, Engheno do Cap. Gama) (1871); *Gieb. Thes. Orn.* iii. p. 638 (syn. emend.) (1877).

Cryptura tataupa, *Vieill. N. D.* xxxiv. p. 108 (1819).

Tinamus tataupa, var., *Swains. Zool. Ill.* i. pl. 19 (1820–21).

Crypturus tataupa, *Licht. Verz. Doubl.* p. 68, n. 707 (San Paulo) (1823); *Wagl. Syst. Av., gen.* Crypturus, sp. 12 (1827); *id. Isis*, 1829, p. 747; *Tsch. Arch. f. Naturg.* 1844, i. p. 307, n. 276 (Peru); *id. Faun. Per., Aves*, p. 46 (1846); *Burm. J. f. O.* 1853, p. 176 (egg); *id. Thier. Bras.* iii. p. 314 (Neu-Freiburg and Lagoa Santa) (1856); *Bp. Compt. Rend.* xlii. p. 881, n. 322 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 323 (1856); *Euler, J. f. O.* 1867, p. 417 (egg); *G. R. Gr. Hand-list*, iii. p. 4, n. 9870 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 5 (S. Brazil and Paraguay) (1873); *Cab. J. f. O.* 1874, p. 230; *Forbes, P. Z. S.* 1877, p. 307 (bursa Fabricii); *Salv. Ibis*, 1880, p. 364 (Salta); *Schleg. Mus. P.-B.*, Tinami, p. 21 (1880); *Forbes, Ibis*, 1881, p. 359 (N.E. Brazil); *Salv. Cat. B. Striekl. Coll.* p. 640, n. 3113 (1882); *White, P. Z. S.* 1882, p. 629 (Oran, Salta); *Sclat. List Vert. An.* 8th ed. p. 545 (Zool. Gard.) (1883); *Berl. u. Ihering, Zeitschr. ges. Orn.* 1885, p. 184 (Taquara do Mundo novo, Rio Grande do Sul); *Tacz. Orn. Pér.* iii. p. 297, *Tables*, p. 106 (1886); *Berl. J. f. O.* 1887, pp. 37, 126 (Paraguay); *Sclat. & Huds. Argent. Orn.* ii. p. 208 (1889); *Heine u. Rehnw. Nom. Mus. Hein. Orn.* p. 303 (Brazil) (1890); *Frenz. J. f. O.* 1891, p. 123; *Hartert, Kat. Vogelsamml.* p. 206, n. 3099 (1891); *Allen, Bull. Amer. Mus. N. H.* v. pp. 151 (young in down), 158 (egg, Matto Grosso) (1893); *Salvad. Boll. Mus. Zool. e di Anat. Comp. Tor.* x. n. 208, p. 24 (Rio Apa) (1895).

Pezus niambu, *Spix, Av. Bras.* ii. p. 63, t. lviii. *a.* (1825).

Tinamus plumbeus, *Mus. Paris*; *Less. Tr. d'Orn.* p. 513 (1831).

Crypturus lepidotus, *Sw. Class. B.* ii. p. 345 (1837).

Nothura tataupa, *Licht. Nom. Av.* p. 87 (1854).

Adult male. Head, neck, and upper breast grey; upper part of the head darker, nearly black, in some specimens tinged with an

olive wash; throat whitish grey; upper parts uniform chestnut-brown; abdomen whitish; sides greyish; lower flanks black, each feather edged with whitish buff, and some have a whitish crescentic or V-shaped mark; under tail-coverts buff, with irregular horse-shoe black bars; quills greyish brown; under wing-coverts grey; tail rufous brown: "iris chocolate; beak blood-red; legs and feet pale purple" (*Durnford*); or "beak vermilion-red; feet dirty pink-red; irides red-brown" (*Forbes*). Total length about 9 inches, wing 4·9–5·5, tail 1·5, culmen 0·90–0·95, tarsus 1·4.

Adult female. Similar to the male, but somewhat larger.

Of the four specimens collected by Mr. Fry (*h–l*), one pair have smaller dimensions and are marked male and female, like the larger pair!

Young birds have the wings with transverse white and black marks (*Schlegel*).

Young in down. "Whole front of head, including lores and sides of the face in front of the eyes, brownish buff; the extreme tips of the downy fibres blackish; a narrow superciliary stripe widening into a broad band behind the eyes, and a narrow stripe dividing the crown and extending down the back of the neck, yellowish brown like the forehead; sides of the crown and nape varied dark rusty brown and blackish; ear-coverts and a narrow maxillary stripe blackish; general colour above rufescent dusky, the fibres of the downy feathers subapically ringed with pale buff; below, chin and throat greyish white, passing on the lower throat into a pale buffy tint; rest of the lower surface mixed buff and dusky; the downy feathers dusky and tipped with yellowish, passing into a rufescent buff posteriorly" (*Allen*).

Hab. Northern (*Forbes*) and Southern Brazil, Paraguay, and Bolivia; according to Tschudi also Peru *; in the Leyden Museum there is a specimen marked Cayenne!

a. Ad. sk.	Paraguay.	Salvin-Godman Coll.
b. ♀ ad. sk.	Salta, June.	H. Durnford, Esq. [P.].
c. Ad. st.	Bolivia.	T. Bridges, Esq. [C.].
d. Ad. sk.	Brazil.	Old Coll.
e. Ad. st.	Brazil.	E. Wilson, Esq. [P.].
f. Ad. sk.	Brazil.	Salvin-Godman Coll.
g. ♀ (?) ad. sk.	Chapada, Matto Grosso, Brazil, Sept. (*H. H. Smith*).	Salvin-Godman Coll.
h–l. ♂ ♀ ad. sk.	Rio de Janeiro.	Alex. Fry, Esq. [P.].

8. Crypturus parvirostris.

Crypturus parvirostris, *Wagl. Syst. Av., gen.* Crypturus, sp. 13 (1827); *Less. Tr. d'Orn.* p. 513 (1831); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 239 (1834); *G. R. Gr. Gen. B.* iii. p. 524, n. 14 (1844); *Bp. Compt. Rend.* xlii. p. 881, n. 327 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 325 (1856); *Burm. Th. Bras.* iii. p. 315

* Two specimens from Eastern Peru (Chanchamayo, *Kalinowski*), marked male and female, have been sent to me for inspection by Mr. Stolzmann; they are nearly alike even in size (!), and agree in every respect with a specimen from Chapada, Matto Grosso, mentioned in the list.

(=tataupæ ♀ juv.!) (1856); *Reinh. Vid. Med. naturh. Foren.* 1870, p. 49 (Minas Geraes and Bahia); *Pelz. Orn. Bras.* pp. 294, 454, lvi (Ypanema, Goiaz, Caiçara, Pausecco, Engenho do Cap. Gama) (1871); *G. R. Gr. Hand-list*, iii. p. 4, n. 6874 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 7 (1873); *Schleg. Mus. P.-B.*, Tinami, p. 22 (1880); *Tacz. Orn. Pér.* iii. p. 298, *Tables*, p. 106 (descr. sed non locus) (1886); *Allen, Bull. Amer. Mus. N. H.* 1893, pp. 151, 158 (Matto Grosso; egg).

? Crypturus pallescens, *Licht. Nomencl. Av.* p. 87 (Brazil) (1854); *Bp. Compt. Rend.* xliii. p. 573 (San Paulo; =parvirostris) (1856); *cf. Schleg. Mus. P.-B.*, Tinami, p. 22 (1880).

Crypturus exiguus, *Olbers, Mus. Berol.*; *Licht. Nom. Av.* p. 87 (Brazil) (1854); *Bp. Compt. Rend.* xlii. p. 881, n. 329 (1856), xliii. p. 573 (=parvirostris, juv.) (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 326 (1856); *cf. Schleg. Mus. P.-B.*, Tinami, p. 22 (1880).

? Crypturus cervinus, *Bp. Compt. Rend.* xlii. p. 881, n. 323, p. 954 (Chiquitos) (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 324 (=pallescens, *Licht.*), p. 16, n. 10 (1856).

Tinamus cervinus, *G. R. Gr. List Gallinæ B. M.* p. 101, n. 32 (1867); *id. Hand-list*, iii. p. 4, n. 9880 (1871).

Crypturus tataupa, part., *Gieb. Thes. Orn.* iii. p. 638 (1877).

Similar to *C. tataupa*, but much smaller and paler, especially on the wings; the upper parts of a paler rufous chestnut; breast pale greyish olive, not distinctly grey: bill and feet red, the latter in dry skins pale yellowish, while in *C. tataupa* they are dark greenish. Total length about 8 inches, wing 4·3, culmen 0·65–0·70, tarsus 1·20–1·15.

A female from Pausecco (*Natterer*), apparently adult, has the sides of the head and the nape pale greyish, while the crown is olive-brown; nearly similar is a very pale bird from Matto Grosso marked male.

Hab. Eastern Brazil, from Bahia to San Paulo and Matto Grosso.

a. Ad. sk.	Brazil.	Salvin-Godman Coll.
b. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Pausecco, Brazil, June (*Natterer*).	Salvin-Godman Coll.
d, *e*, *f*. ♂ ♀ ad. sk.	Chapada, Matto Grosso, Aug., Oct., Nov. (*H. H. Smith*).	Salvin-Godman Coll.

9. Crypturus undulatus.

Inambú listado, *D'Azar. Apunt.* iii. p. 52, n. 331 (1805); *id. Voy.* (*Sonn. ed.*) iv. p. 153, n. 331 (1809).

Tinamus undulatus, *Temm. Pig. et Gallin.* iii. pp. 582, 751 (1815) (Paraguay, *ex Azara*); *Steph. Gen. Zool.* xi. 2, p. 402 (note) (1819); *Temm. Pl. Col., genre* Tinamou, sp. 10 (1826); *Less. Man.* ii. p. 206 (1828); *id. Tr. d'Orn.* p. 512, n. 8 (1831); *id. Compl. de Buff.* 2nd ed. ii. p. 239 (1838); *G. R. Gr. Gen. B.* iii. p. 524, n. 9 (1844); *Hartl. Ind. Azar. Apunt.* p. 21, n. 331 (1847); *G. R. Gr. Gen. B.*, Append. p. 25 (1849); *id. List Gallinæ Brit. Mus.* p. 98 (syn. nec specim.) (1867); ? *Sclat. P. Z. S.* 1876, p. 396 (Zool. Gard.); *Gieb. Thes. Orn.* iii. p. 638 (syn. emend.) (1877); ? *Sclat. List Vert. An.* 8th ed. p. 546 (1883) (Zool. Gard.).

Cryptura sylvicola, *Vieill. N. D.* xxxiv. p. 207 (1819) (*ex Azara*).

Tinamus sylvicola, *Vieill. Enc. Méth.* i. p. 372 (1820).
Crypturus undulatus, *Wagl. Syst. Av., gen.* Crypturus, sp. 8 (1827) (*ex Azara*); *id. Isis*, 1829, p. 746 (part.); *Bp. Compt. Rend.* xlii. p. 881, n. 324 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 321; *G. R. Gr. Hand-list*, iii. p. 4, n. 9871 (syn. emend.) (1871); *Berl. J. f. O.* 1887, p. 126, n. 352; *G. Kerr, Ibis*, 1892, p. 151 (Lower Pilcomayo); *Sclat. t. c.* pp. 151, 152.

Adult. Upper part of the head black, slightly mottled with rufous brown on the occiput; throat whitish; neck with black and rufous bars; back similar, but the bars broader and better defined, the light bars becoming greyish on the lower back, rump, and upper tail-coverts; upper wing-coverts greyish olive, vermiculated with black, the greater ones broadly barred with black and rufous grey; bastard-wing, primary-coverts, and primaries greyish black; under wing-coverts brown-black, the last row grey, the central ones greyish; lower fore neck and sides of breast greyish, with dusky vermiculations; middle of the breast whitish; flanks buff, with black bars: under tail-coverts rufescent, with irregular black bars and buff tips; tail barred with black and rufescent: bill horny black above, paler beneath; feet in dry skin brown. Total length about 12 inches, wing 7, tail 2·5, culmen 1·1, tarsus 2·1.

The only specimen I have seen of this species is the one collected on the Lower Pilcomayo by Graham Kerr; D'Azara says he has seen eight specimens in 24° S. lat., about the same latitude as the Lower Pilcomayo. It apppears to me that the specimen examined is different from the Bolivian and Brazilian birds (*C. scolopax=radiatus*). The principal differences are the much darker colouring, the much broader barrings of the upper parts, the upper part of the head almost entirely black, and the bastard-wing, primary-coverts, and primaries of a much darker greyish brown, nearly black.

Hab. Paraguay and Argentine Republic along the Lower Pilcomayo.

a. Ad. sk. Lower Pilcomayo. Graham Kerr, Esq. [P.].

10. Crypturus scolopax. (Plate XII.)

Nothocercus scolopax, *Bp.** *Tabl. Parall. Ordr. Gallin.* (*Extract*), p. 12, n. 335, p. 18, n. 13 (Santa Cruz, *D'Orbigny*) (1856) (type examined); *G. R. Gr. Hand-list*, iii. p. 5, n. 9894 (1871).
Tinamus radiatus, *G. R. Gr. List Gallinæ Brit. Mus.* p. 100 (Bolivia) (1867); *Gieb. Thes. Orn.* iii. p. 637 (1877).
Tinamus undulatus, *Pelz.* (*nec Temm.*) *Orn. Bras.* pp. 292, 293, 453, lv (part. Cujaba, Villa Maria, Barra do Jauru, Caiçara, Engenho do Cap. Gama, Matto Grosso) (1871).
Nothocercus radiatus, *G. R. Gr. Hand-list*, iii. p. 4, n. 9885 (1871).
Crypturus radiatus, *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 152, n. 15 (1853); *id. P. Z. S.* 1879, p. 642 (Bolivia) (=N. scolopax, *Bp.*?).

* This name does not appear in the 'Comptes Rendus' (xlii.) whence the 'Tableaux Parallèliques' have been extracted, but only in the Extracts, where many additions and alterations were made by the Author.

Crypturus undulatus, *Sclat. & Salv.* (*nec Temm.*) *Nom. Av. Neotrop.* p. 152, n. 16 (Amazonia and Brasilia) (1873); *Schleg. Mus. P.-B.*, Tinami, p. 29 (syn. emend.) (1880); *Allen, Bull. Amer. Mus. N. H.* v. pp. 151, 158 (egg; Matto Grosso) (1893).

Adult. Upper parts greyish olive, with a slight chestnut tinge on the mantle, everywhere waved with black lines or narrow irregular bars; forehead slate-colour; occiput, nape, and lower neck, also in front, rufous, undulated with narrow dusky bars; sides of the head greyish anteriorly, rufescent posteriorly; throat white; lower parts pale buff, uniform along the middle; breast and sides dull pale olive, waved with fine dusky lines, more or less obsolete; flanks buff, more or less broadly barred with brown-black; under tail-coverts rufescent, irregularly barred with black and tipped with whitish buff; bastard-wing and primaries uniform grey, the secondaries waved with olive-grey and black on the outer web; under wing-coverts dusky grey, the last row very pale grey, the central ones grey, waved and tipped with white; tail pale rufous, waved with dusky lines: "iris dark brown" (*Garlepp*); bill dusky above, pale underneath; feet in dry skin dusky. Total length about 12 inches, wing 7·4, tail 2·5, culmen 1·1, tarsus 1·9.

The *male* seems to differ in the coarser barrings above and in the somewhat smaller dimensions.

Hab. Bolivia and Brazil, from Matto Grosso to Cujaba.

The Figure is taken from one of the types of *Tinamus radiatus*.

a, *b*. Ad. st.	Bolivia.	T. Bridges [C.]. (Types of *Tinamus radiatus*, G. R. Gr.)
c. Ad. sk.	Bolivia (*Bridges*).	Eyton Coll.
d. Ad. sk.	Bolivia (*Bridges, Eyton Coll.*).	Salvin-Godman Coll.
e. ♀ ad. sk.	Villa Maria, Matto Grosso, Sept. (*Natterer*).	Salvin-Godman Coll.
f, *g*, *h*. ♂ ♀ ad. sk.	Chapada, Matto Grosso, April, May, Sept. (*H. H. Smith*).	Salvin-Godman Coll.

11. Crypturus adspersus.

Tinamus adspersus, *Temm. Pig. et Gallin.* iii. pp. 585, 751 (Para; *Mus. Berol.*) (1815); *Steph. Gen. Zool.* xi. 2, p. 411 (1819); *Vieill. Enc. Méth.* i. p. 371 (1820); *Temm. Pl. Col., genre* Tinamou, sp. 11 (1826); *Less. Tr. d'Orn.* p. 512, n. 3 (1831); *id. Compl. de Buff.* 2nd ed. ii. p. 239 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839) (=vermiculatus); *G. R. Gr. Gen. B.* iii. p. 524, n. 4 (1844); ? *Rehnb. Syn. Av.*, Gallinaceæ, t. 284. f. 1560 (1848) (*ex Spix*); *G. R. Gr. List Gallinæ Br. Mus.* p. 101, n. 29 (1867); *Gieb. Thes. Orn.* iii. p. 635 (1877).

Cryptura adspersa, *Vieill. N. D.* xxxiv. p. 103 (1823).

Crypturus adspersus, *Licht. Verz. Doubl.* p. 68, n. 704 (San Paulo) (1823); *Wagl. Syst. Av., gen.* Crypturus, sp. 3 (1823); *Thienem. Fortpflanz.* p. 24 (1845); *Licht. Nom. Av.* p. 87 (1854); *Burm. Th. Bras.* iii. p. 319 (1856); *Bp. Comp. Rend.* xlii. p. 881, n. 320 (1856); *id. Tabl. Parall. Gallin. (Extract)*, p. 12, n. 319, p. 16, n. 11* (1856); *G. R. Gr. Hand-list*, iii. p. 4, n. 9878 (1871);

* A specimen sent by M. Fontanier from Santa Marta differs in being more rufous, especially on the tail, and with finer vermiculations (*Bonaparte*).

Schleg. Mus. P.-B., Tinami, p. 28 (1880); *Bartl. P. Z. S.* 1882, p. 375 (critical); *Cab. ibid.*

Tinamus vermiculatus, *Temm. Pl. Col.* 369 (Brazil) (1825); *Less. Man.* ii. p. 206 (1828); *id. Tr. d'Orn.* p. 512, n. 4 (1831); *Hartl. Syst. Verz. Ges. Mus.* p. 105 (1844); *G. R. Gr. Gen. B.* iii. p. 524, n. 5 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 284. f. 1559 (1848) (*ex Temminck*); *G. R. Gr. List Gallinæ Br. Mus.* p. 101, n. 30 (1867).

? Pezus japura, *Spix, Av. Bras.* ii. p. 62, t. 78 (1825) *.

Crypturus vermiculatus, *Wagl. Syst. Av., gen.* Crypturus, sp. 4 (1827); *Thienem. Fortpflanz.* t. v. f. 6 (egg) (1845); *Burm. Th. Bras.* iii. p. 318 (1856); *Bp. Compt. Rend.* xlii. p. 881, n. 321 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 320, p. 16, n. 11 (1856) (=adspersus); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 48; *Bartl. P. Z. S.* 1882, p. 375 (critical); *Cab. ibid.* (=adspersus).

Tinamus vermiculosus, "*Temm.*," *apud Thienem. Fortpflanz.* p. 24 (1845).

Tinamus undulatus, part. (?), *Pelz. Orn. Bras.* pp. 292, 293, 453, lv (Rio Paraná, Rio Araguay, Matto Grosso, Borba, Madeiraufer, Rio Branco, Manaqueri) (1871).

Very similar to *C. scolopax*, from which it differs in having the neck and posterior part of the head not distinctly rufescent with dusky bars, but greyish, and the upper parts with finer vermiculations; the lower parts are usually more whitish; the flanks more or less brightly rufous.

Adult male. Forehead slaty grey, changing into brown on the occiput; sides of the head greyish; throat white, in some specimens tinged with grey; neck greyish olive-brown with obsolete vermiculations; mantle and back chestnut-brown, changing into olive-grey on the rump, upper tail-coverts, and wings; all the upper parts finely vermiculated with narrow dusky lines; breast and sides greyish olive, more or less vermiculated with narrow dusky lines; middle of the breast and abdomen uniform whitish or whitish buff; flanks more or less brightly rufous and with crescentic narrow brown bars, sometimes obsolete or wanting; under tail-coverts rufescent, with the centres and crescentic narrow bars black, the tips pale buff; primaries slaty grey; secondaries more or less olive-grey, vermiculated with dusky lines on the outer web; under wing-coverts grey, the marginal ones darker, the last row paler, the central whitish freckled with grey; tail olive-rufous, vermiculated with dusky lines. Total length about 13 inches, wing 7·2, tail 2·6, culmen 1·15, tarsus 1·9–2.

A specimen from San Paulo, belonging to the San Paulo Museum, has been sent to Graf von Berlepsch by von Jhering for identification: this has the flanks of a very bright uniform rufous, with no bars whatever; the under tail-coverts are also bright rufous, but with irregularly crescentic narrow black bars, and the tail-feathers of a dark rufous brown, freckled with irregular dusky lines.

Hab. Brazil (and, if the same, also Santa Marta !).

a. ♂ ad. sk. Rio Araguay, Nov. (*Natterer*). Salvin-Godman Coll.

* *Pezus japura*, figured with yellow legs, seems very different from Temminck's plate of *T. vermiculatus*!

12. Crypturus simplex.

Similar to *C. adspersus* and nearly of the same size, but differs in having the flanks not rufous, but whitish or whitish buff, regularly barred with crescentic brown-black bars; the abdomen appears whiter, at least in two males, while in the female it is whitish buff. The back is tinged with chestnut more distinctly than in *C. adspersus*. The female is smaller than the two males. "Bill black; irides hazel; legs bluish slate; claws brown" (*Whitely*). Total length 12–13 inches, wing 6·9–7·1, tail 2·4, culmen 1·0–1·1, tarsus 1·9–2·05.

There is also a great likeness between this species and *C. balstoni*, from which it differs in having the sides of the head greyish, and the upper tail-coverts also greyish, or olive-grey, different from the olive-brown back.

Hab. British Guiana, along the Rio Rupurumi.

a–c. ♂ ♀ ad. sk. Rio Rupurumi, Brit. Guiana, March, April, July (*H. Whitely*). Salvin-Godman Coll. (Types of species.)

13. Crypturus balstoni. (Plate XIII.)

Crypturus adspersus, *Tsch.* (*nec Temm.*) *Arch. f. Naturg.* 1844, i. p. 307, n. 278 (Peru); *id. Faun. Per., Aves*, p. 46, n. 3 (1846); *Sclat. & Salv. P. Z. S.* 1873, p. 311 (Santa Cruz, on the Huallaga River, E. Peru).

Crypturus balstoni, *Bartl. P. Z. S.* 1882, p. 374 (Elvira, E. Peru); *Reichnw. u. Schal. J. f. O.* 1883, p. 408; *Tacz. Orn. Pér.* iii. p. 299, *Tables*, p. 107 (1886).

Similar to *C. adspersus*, but differs in having the whole of the upper parts from the mantle to the upper tail-coverts brown-chestnut; the cheeks much darker, being of a dark brown colour; the lower parts more grey, and, except the middle of the abdomen, vermiculated all over with dusky lines; the flanks are not broadly barred, but brown with narrow vermiculations, and with the tips of the feathers more or less whitish.

Adult male (type). Upper parts brown-chestnut, changing into brown-olive on the wings, and finely vermiculated with narrow dusky lines; upper part of the head blackish, changing into deep brown on the nape; sides of the head and neck brown-chestnut; throat white; lower fore neck and breast grey, finely undulated with dusky lines; abdomen whitish, with hidden brown bars; sides greyish brown, vermiculated with dusky lines; lower flanks brown, with dusky narrow bars and white bars at the tips of the feathers: under tail-coverts basally black, with rufescent and black V-shaped marks and with the edges whitish buff; primaries greyish; under wing-coverts brownish grey, the inner ones whitish, and the last row light grey like the under surface of the quills: "iris light brown" (*Hauxwell*); bill brown in the dry skin, blackish above, pale below; feet brown. Total length 12 inches, wing 6·8, culmen 1·5, tarsus 2.

I have to remark on Plate XIII. that the artist has drawn the head too thick and the bill much too arched. The feet in dry skins are brown.

Hab. E. Peru.

a. ♂ ad. sk.	Elvira, E. Peru, Jan. (*J. Hauxwell*).	Maidstone Museum [P.]. (Type of species.)
b, *c*. ♂ ad. sk.	Elvira, Jan. (*J. Hauxwell*).	Salvin-Godmau Coll.
d. ♂ ad. sk.	Samiria, Nov. (*J. Hauxwell*).	Salvin-Godman Coll.
e, *f*. ♂ ad. et ♀ imm. sk.	Santa Cruz, on the Huallaga River, E. Peru, July, Aug. (*Bartlett*).	Salvin-Godman Coll.

14. Crypturus atricapillus.

Crypturus atrocapillus, *Tsch. Arch. f. Naturg.* 1844, i. p. 307, n. 281 (Peru); *id. Faun. Per., Aves*, pp. 47, 284, n. 6 (1844); *Licht. Nom. Av.* p. 87 (Brazil! and Peru) (1854); *Berl. J. f. O.* 1892, p. 455 (critical).

Tinamus atro-capilius, *G. R. Gr. Gen. B.* iii. p. 524, n. 15 (1844); *id. List Gallinæ Brit. Mus.* p. 101, n. 27 (1867); *Gieb. Thes. Orn.* iii. p. 635 (1877); *Taez. Orn. Pér.* iii. p. 294, *Tables*, p. 106 (1886).

Nothocercus atricapillus, *Bp. Compt. Rend.* xlii. p. 881, n. 336 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 333 (1856); *G. R. Gr. Hand-list*, iii. p. 5, n. 9891 (1871).

Crypturus erythropus, part., *Schleg. Mus. P.-B.*, Tinami, p. 34 (1880).

Adult (type) *. Upper part of the head black; sides of the forehead brown; superciliary band, posteriorly to the eyes, throat, and middle of the breast bright rufous; sides of the head brown; lores tinged with rufous; nape blackish; lower part of the neck greyish olive, waved with dusky lines; back, rump, and upper tail-coverts olive-brown, undulated with blackish-brown irregular bars; wings similar, but more olive; abdomen pale rufous; sides and flanks greyish olive-brown, waved with dusky lines; lower flanks with broadish brown-black bars and narrower blackish-buff ones; under tail-coverts rufous buff, the mesial part towards the base black, the lighter portion sprinkled or barred with black; the greater upper wing-coverts with small buff spots on the outer web; primaries uniform greyish brown; secondaries variegated with olive-brown on the outer web, and with some rufescent spots arranged in a bar-like manner; under wing-coverts grey, the median ones whitish: "bill black, lower mandible yellow; feet yellow; iris brown" (*Tschudi*). Total length about 12 inches, wing 6·75, culmen 1·1, tarsus 2·25.

Hab. Peru.

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* Thanks to Prof. Paul Godet, I have been able to examine and describe the type of this species, which is not in the Collection of the British Museum.

15. Crypturus garleppi.

Crypturus garleppi, *Berlepsch, Ber. Allg. Deutschl. Orn. Ges.* Dec. 1892, p. 13 (Santa Cruz de la Sierra, Bolivia); *id. J. f. O.* 1892, p. 454.

Male (*adult*?) (type). Very similar to the type of *C. atricapillus*, but the upper parts paler brown, with finer black vermiculations; the feathers of the rump and upper tail-coverts with broader black barrings, and besides with pale or fulvous subapical bars; also the wings have broader black marks and more distinct and more regular pale or fulvous barrings, especially on the greater wing-coverts and secondaries; the black on the upper part of the head less extended, being confined to the forehead and crown, and not so deep, being slaty greyish on the forehead and over the eyes; the rufous of the throat much paler; the occiput and nape not uniform brown-black, but rufous brown freckled with black; the lower fore neck and sides of the breast not so dark slaty olive, but browner; middle of the breast bright rufous; middle of the abdomen pale rufous; feathers of the lower flanks with broadish brown-black subapical bars and reddish-buff apical ones; under tail-coverts buff, the mesial part black, the lighter portion freckled with brown; bastard-wing, primary-coverts, and primaries uniform greyish brown; tail olive-brown, freckled with black: "iris brown" (*Garlepp*); in dry skin, bill brown, with the base of the lower mandible pale; feet pale horn-colour. Total length about 11 inches, wing 6·75, culmen 1·1, tarsus 2·1.

Thanks to Count von Berlepsch, I have seen the type and unique specimen of this species; perhaps a large series of specimens from Bolivia and Peru may prove that *C. garleppi* is not different from *C. atricapillus*.

Hab. Bolivia, near Santa Cruz.

16. Crypturus strigulosus.

Tinamus strigulosus, *Temm. Pig. et Gallin.* iii. pp. 594, 752 (Pará) (1815); *Steph. Gen. Zool.* xi. 2, p. 414 (1819); *Vieill. Enc. Méth.* i. p. 374, n. 13 (1820); *Temm. Pl. Col., genre* Tinamou, sp. 14 (1826); *Less. Tr. d'Orn.* p. 512 (1831); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 240 (1838); *G. R. Gr. Gen. B.* iii. p. 524, n. 10 (1844); *id. List Gallinæ Brit. Mus.* p. 10, specim. *a* (1867); *Pelz. Orn. Bras.* pp. 293, 453, lv (Matto Grosso, Borba, Pará) (1871); *Gieb. Thes. Orn.* iii. p. 638 (1877).

Cryptura strigulosa, *Vieill. N. D.* xxxiv. p. 106 (1819).

Crypturus strigulosus, *Wagl. Syst. Av., gen.* Crypturus, sp. 9 (1827); *Thienem. Fortpflanz.* p. 25 (1845); *Burm. Th. Bras.* iii. p. 322 (1856); *Bp, Compt. Rend.* xlii. p. 887, n. 326 (1856), xliii. p. 573 (1856); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 8 (1873); *Schleg. Mus. P.-B.*, Tinami, p. 27 (N. Granada!) (1880).

Tinamus strigulatus, *Less. Man.* ii. p. 207 (1828).

Nothura strigulosa, *Licht. Nom. Av.* p. 87 (1854).

Nothocercus strigulosus, *Bp. Compt. Rend.* xlii. p. 881, n. 334 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 334 (1856); *G. R. Gr. Hand-list*, iii. p. 5, n. 9886 (1871).

Adult male. Upper parts olive rufous-brown; upper wing-coverts and upper tail-coverts more olive, the latter with pale buff bars, and between these with obsolete black bar-like marks, and freckled with irregular dusky lines; forehead blackish brown; lores, sides of the head, and throat rufous cinnamon, paler on the chin *; hind part of the neck rufous brown; lower fore part of the neck and breast grey, obsoletely vermiculated with olive-brown; sides olive-brown; middle of the abdomen white; lower flanks olive-brown, the feathers with apical whitish and subapical black bars; under tail-coverts bright rufous, freckled with irregular black bars and tipped with whitish buff; bastard-wing, primary-coverts, and primaries uniform brown; greater upper wing-coverts with black subapical marks and some pale buff spots or marks; secondaries variegated with olive-brown on the edge of the outer web; marginal under wing-coverts greyish brown, the last row grey, the central ones whitish; tail-feathers olive rufous-brown, with a subapical rufescent narrow bar: bill dusky above, paler beneath; feet in dry skin whitish. Total length about 12 inches, wing 6·25, tail 2, culmen 1·1, tarsus 1·85.

The *female* differs from the male in having the upper parts distinctly barred with black and fulvous buff [like the females of *C. erythropus*].

Hab. Brazil, from Pará to Matto Grosso; the locality New Granada (*Schlegel*) is open to doubt.

a. ♀? ad. st.	Pará.	R. Graham, Esq. [P.].
b. ♂ ad. sk.	Matto Grosso, Brazil, Nov. (*Natterer*).	Salvin-Godman Coll.

17. Crypturus erythropus. (Plate X.)

Tinamus erythropus, *Natt. Cat. MS.*; *Pelz. Verh. z.-b. Ges. Wien*, 1863, p. 1127 (1863); *Natt. ibid.* p. 1129 (1863); *G. R. Gr. List Gallinæ Br. Mus.* p. 101, n. 34 (1867); *Pelz. Orn. Bras.* pp. 293, 453, lv (Rio Negro, Barra do Rio Negro, Forte do Rio Branco) (1871); *Gieb. Thes. Orn.* iii. p. 636 (1877); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 52 (types) (1888).

Tinamus strigulosus, part., *G. R. Gr. List Gallinæ Brit. Mus.* p. 100, specim. *b* (1867).

Tinamus longirostris, *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 20 (1867); *Gieb. Thes. Orn.* iii. p. 636 (1877).

Nothocercus longirostris, *G. R. Gr. Hand-list*, iii. p. 5, n. 9887 (1871).

Nothocercus erythropus, *G. R. Gr. Hand-list*, iii. p. 5, n. 9893 (1871).

Crypturus erythropus, *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 9 (1873); *Schleg. Mus. P.-B.*, Tinami, p. 34 (syn. emend.) (1880); *Berl. J. f. O.* 1892, p. 455 (critical).

Adult male. Upper part of the head brown, changing into rufous brown on the occiput and nape; back rufous brown, more or less olivaceous; mantle slightly and indistinctly vermiculated; upper tail-coverts olive-brown, barred with black and ochreous yellowish;

* The throat is white in some specimens, at least according to Schlegel's description.

upper wing-coverts like the back, only more olivaceous, with a few irregular narrow black bars, and with ochreous dots and narrow bars near the edge; bastard-wing, primary-coverts, and primaries greyish brown; secondaries freckled with ochreous on the outer edge; marginal under wing-coverts greyish brown, the last row pale grey, the central ones greyish white; lores, sides of the head and of the neck rusty rufous; throat in some specimens white, in others, perhaps not fully adult, rufescent; lower fore neck and upper breast dull ashy; abdomen paler along the middle, whitish on the lower part; sides rufous brown, more or less olive; flanks barred with brown, each feather with apical pale buff bars; under tail-coverts rufous, with black irregular bars and uniform tips; tail rufous brown, with black marks near the edges and ochreous bars near the tip: "iris yellow-brown or pale brown; upper mandible brown-black, lower greyish flesh-colour with the tip dusky; feet red" (*Natterer*). Total length about 13 inches, wing 6·5, tail 1·8, culmen 0·9–1, tarsus 1·8–1·9.

Of the two males collected by Natterer, mentioned below, the one from Forte do Rio Branco is more olive above, has the throat pure white, the lower fore neck and upper breast more greyish; the other, from Barra do Rio Negro, is more rufous brown above, has the throat rufous mixed with a few white feathers, the lower fore neck more brown, and the upper breast rufous with no distinct greyish tinge.

Female. "Upper wing-coverts, lower back, and upper tail-coverts with ochreous bars" (*Pelzeln*); iris dark brown; feet dark rosy" (*Natterer*).

Hab. Central Brazil, in the Amazons region.

a. Ad. st. Brazil. E. Wilson, Esq. [P.].
(*Tinamus strigulosus*, G. R. Gr. List Gallin. p. 100, specim. *b*.)

b. Ad. st. Brazil? Zool. Soc. Coll.
(Type of *T. longirostris*, G. R. Gr.)

c. ♂ ad. sk. Barra do Rio Negro, Brazil, Nov. (*Natterer*). Salvin-Godman Coll.

d. ♂ ad. sk. Forte do Rio Branco, Brazil, Dec. (*Natterer*). Salvin-Godman Coll.

(Typical specim. of *C. erythropus*, Pelz.)

18. Crypturus variegatus.

Tinamou varié de Cayenne, *D'Aubent. Pl. Enl.* 828.
Tinamou varié, *Buff. Hist. Nat. Ois.* iv. p. 511 (1778).
Variegated Tinamou, *Lath. Syn.* ii. 2, p. 726, n. 3, t. 65 (1783).
Tetrao variegatus, *Gm. S. N.* i. 2, p. 768, n. 65 (1788).
Tinamus variegatus, *Lath. Ind. Orn.* ii. p. 634, n. 3 (1790); *Temm. Pig. et Gallin.* iii. pp. 576, 750 (1815); *Steph. Gen. Zool.* xi. 2, p. 409, pl. 26 (1819); *Wied, Reise nach Bras.* i. p. 262 (1820), ii. p. 121 (1821); *Temm. Pl. Col., genre* Tinamou, sp. 9 (1826); *Less. Man.* ii. p. 206 (1828); *id. Tr. d'Orn.* p. 512 (1831); *Wied, Beitr.* iv. p. 510 (1832); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839); *Hartl. Syst. Verz. Ges. Mus.* p. 105 (1844); *G. R. Gr. Gen. B.* iii. p. 524, n. 8 (1844);

id. List B. Brit. Mus. iii. p. 52 (1844); *Rchnb. Syn. Av.*, Gallin. t. 286. ff. 1570-71 (1848); *Sclat. P. Z. S.* 1861, p. 234 (Zool. Gard.); *Holland, J. f. O.* 1861, p. 31 (powder-down); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 26 (1867); *Pelz. Orn. Bras.* p. 293 (Borba, Barra do Rio Negro, Marabitanas, Pará), pp. 453, lv (1871); *id. Ibis*, 1873, p. 120; *Gieb. Thes. Orn.* iii. p. 638 (1877); *Tristr. Cat. Coll. B.* p. 2 (1889).

Tinamus variegata, *Bonn. Enc. Méth.* i. p. 225, n. 3, pl. 90. f. 1 (1791).

Cryptura variegata, *Vieill. N. D.* xxxiv. p. 109 (1819).

Cryptura sylvicola, *Vieill. Gal. des Ois.* ii. p. 49, pl. 216 (1825) (*nec N. D.* xxxiv. p. 207, 1819).

Crypturus variegatus, *Wagl. Syst. Av., gen.* Crypturus, sp. 7 (1827); *Thienem. Fortpflanz.* p. 25, t. v. f. 8 (egg) (1845); *Schomb. Reis. Brit. Guian.* iii. p. 748 (1848); *Burm. J. f. O.* 1853, p. 176 (egg); *Licht. Nom. Av.* p. 87 (1854); *Burm. Th. Bras.* iii. p. 321 (1856); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 13 (1873); *Schleg. Mus. P.-B.*, Tinami, p. 32 (1880); *Salv. Cat. B. Strickl. Coll.* p. 640, n. 3111 (1882); *Sclat. List Vert. An.* 8th ed. p. 546 (1883) (Zool. Gard.); *Salv. Ibis*, 1886, p. 181 (Brit. Guiana); *Hartert, Kat. Vogelsamml.* p. 206, n. 3098 (1891).

? Crypturus undulatus, *Wagl. Isis*, 1829, p. 746 (part., Brazil); *Burm.* (*nec Temm.*) *Th. Bras.* ii. p. 322 (1856).

Tinamus ——?, *G. R. Gr. List B. Brit. Mus.* iii. p. 53 (young) (1844) (=bimaculatus).

? Tinamus undulatus, *Rchnb.* (*nec Temm.*) *Syn. Av.*, Gallinaceæ, t. 285. f. 1567 (1848) (*ex Vieillot* ?) *; *G. R. Gr.* (*nec Temm.*) *List Gallinæ Brit. Mus.* p. 98 (1867).

Nothocercus variegatus, *Bp. Compt. Rend.* xlii. p. 881, n. 335 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 332 (1856); *G. R. Gr. Hand-list*, iii. p. 5, n. 9889 (1871); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Guiana) (1890).

Tinamus bimaculatus, *G. R. Gr. List Gallinæ Brit. Mus.* p. 101 (1867) (juv.).

Crypturus undulatus, part., *G. R. Gr. Hand-list*, iii. p. 4, n. 9871 (1871) (juv.).

Tinamus undulatus, part., *Gieb. Thes. Orn.* iii. p. 638 (1877) (juv. *).

Adult male. Upper part and sides of the head brown-black; throat white; neck all round and breast cinnamon-rufous, deeper on the hind neck; back, rump, upper tail-coverts, and upper wing-coverts regularly banded across with olive-rufescent and black bars; abdomen fulvous, nearly white on the lower part; sides greyish brown, with brown and rufescent bars; lower flanks brown, the feathers with whitish-buff bars at the tip; under tail-coverts basally black, the tip broadly buff; primaries, primary-coverts, and bastard-wing uniform brown-black; secondaries brown-black, with rufescent marks on the outer web; tertials with rufescent bars; under wing-coverts greyish brown, the inner ones whitish, the last row light grey; tail brown-black, with three rufous bars: "iris dark brown: bill dark brownish-black horn-colour: tarsus pale yellowish grey; toes with a greenish tinge" (*Wied*). Total length about 11 inches, wing 6·4, culmen 1·1, tarsus 1·52.

* Feet red!

Female. Similar to the male, but the lower parts less whitish and more rufescent; under tail-coverts with no white tips; the bars on the upper parts somewhat narrower (*Wied*). It appears to me that the female is to be distinguished by the upper parts being blacker, with more regular and narrower rufous bars; besides each feather has two rufous bars.

Young. Differs from the adult in having white dots on the forehead, behind the eyes, on the cheeks and upper parts; the feathers of the fore neck have blackish subapical bars and white tips; also the feathers of the lower parts have white tips, most conspicuous on the lower flanks.

Young in first moult has no barrings on the upper parts, which are olive-brown, more or less marked with black and dotted with white.

Hab. Guiana and Lower Amazonia.

a, b. ♀ ♂ ad. et pull. sk.	Takutu, Brit. Guiana, March, May, June (*H. Whitely*).	Salvin-Godman Coll.
c, d, e. ♀ ad. et ♂ ♀ juv. sk.	Bartica Grove, Brit. Guiana, Sept., Oct., Dec. (*H. W.*).	Salvin-Godman Coll.
f. ♂ ad. sk.	Camacusa, Brit. Guiana, April (*H. W.*).	Salvin-Godman Coll.
g. ♂ juv. sk.	Roraima, Brit. Guiana (alt. 3500 ft.), Jan. (*H. W.*).	Salvin-Godman Coll.
h. Juv. sk.	Merumé Mts., Brit. Guiana, July (*H. W.*).	Salvin-Godman Coll.
i. Ad. sk.	Cayenne.	H. C. Rothery [P.].
k. Ad. st.	Brazil.	Old Coll.
l. Ad. st.	Brazil.	Dr. J. E. Gray [P.].
m, n. Ad. sk.	Brazil.	Purchased.
o. Ad. sk.	Pará.	R. Graham, Esq. [P.].
p. ♂ ad. sk.	Pará, Nov. (*Natterer*).	Salvin-Godman Coll.
q. Ad. sk.	Bahia, Brazil.	Sudbury Museum.
r. Juv. st.	S. America.	Purchased.

(Type of *Tinamus bimaculatus*, G. R. Gr.)

19. Crypturus salvini.

Similar to *C. variegatus*, but the dark bars on the sides and flanks less sharply defined and nearly obsolete on the sides, the rufous and black bars of the upper parts less defined, *the feathers of the back and rump and upper wing-coverts with only one rufous bar*, and the black tips much broader.

One specimen, possibly a *female*, has the rufous bars on the upper parts better defined than in the other two adult birds, probably *males*.

Young in first moult. Similar to that of *C. variegatus*, and like it has the upper parts olive-brown, dotted with white and with no bars.

Hab. Sarayacu, Ecuador.

a–d. Ad. et juv. sk.	Sarayacu, Ecuador (*C. Buckley*).	Salvin-Godman Coll. (Types of species.)

20. Crypturus brevirostris.

Tinamus brevirostris, *Natt. Cat. MS.*; *Pelz. Verh. z.-b. Ges. Wien*, 1863, p. 1128 (Brazil); *Natt. ibid.* p. 1130 (Barra do Rio Negro) (1863); *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 35 (1867); *Pelz. Orn. Bras.* pp. 294, 453, lv (Barra do Rio Negro) (1871); *Gieb. Thes. Orn.* iii. p. 635 (1877); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 5 (types) (1888).

Nothocercus brevirostris, *G. R. Gr. Hand-list*, iii. p. 5, n. 9890 (1871).

Crypturus variegatus, part., *Schleg. Mus. P.-B.*, Tinami, p. 32 (1880).

"*Tinamus* pileo, capitis lateribus, et nuchæ stria longitudinali nigro rufoque variegatis (plumis nigrescentibus late rufo limbatis), colli lateribus et reliqua nucha ferrugineo-rufis, plumis dorsi et uropygii, tectricibus caudæ superioribus et tectricibus alarum superioribus nigris, singula fasciis transversalibus 2–3 olivascente-ochraceis $1\frac{1}{2}$–3‴ latis (tectricibus alarum majoribus in uno individuo hinc inde macula vel fascia alba irregulari), remigibus cinereo-brunneis, secundariis margine externo interdum et versus apicem interni maculis parvis ochraceis irregularibus, tectricibus alarum inferioribus extimis cinereo-brunneis, reliquis albidis, gula alba, collo inferiore, pectore et abdomine ferrugineo-rufis, abdomine medio albescente, lateribus corporis canescente-ochraceis fasciis transversalibus nigris irregularibus, plumis crissi et tectricibus caudæ inferioribus ochraceis, fasciis transversis 1–2 nigris, rectricibus cinereo-brunneis. Longit. tot. 10″, rostri a rictu 13‴, a fronte 9‴, a naribus 4‴, alæ $5\frac{1}{2}$–$5\frac{3}{4}$″, tarsi 18–19‴, digiti medii cum ungue 1″." (*Pelzeln*).

Similar to *C. variegatus*, but much smaller, the bill much shorter, and the upper part of the head rusty red. The light bars on the upper parts are much broader and less numerous, standing further apart, and besides they are not of an ochreous colour as in *C. variegatus*, but pale brown.

The young bird has the whole of the back pale brown with few indistinct black bars. The sides of the breast and of the abdomen less spotted or barred; the brown bars are $1\frac{1}{2}$‴ broad. Bill from the gape 14‴, from forehead 9‴, wings 5″ 4‴, tarsus 19‴ (*Natterer*).

I am not acquainted with this species; Schlegel thinks it is the young of *C. variegatus*; but the young of that bird is very peculiar in having white dots on the upper parts, not mentioned in Pelzeln and Natterer's descriptions.

Hab. Barra do Rio Negro, C. Brazil.

21. Crypturus bartletti. (Plate XI.)

Crypturus bartletti, *Sclat. & Salv. P. Z. S.* 1873, p. 311 (E. Peru); *id. Nom. Av. Neotrop.* p. 152, n. 14 (1873); *Bartl. P. Z. S.* 1882, p. 375 (Santa Cruz on the Huallaga River, E. Peru); *Tacz. Orn. Pér.* iii. p. 301, *Tables*, p. 107 (1886).

Tinamus bartletti, *Gieb. Thes. Orn.* iii. p. 635 (1877).

Adult. Upper part of the head black, sides of the head and nape brown; mantle olive-brown; back, rump, and upper tail-coverts regularly barred with olive-brown and black, on the wings the lighter bars are paler and more ochreous; throat white; lower fore neck and breast ochreous olive, lower breast rufescent, changing into fulvous buff on the abdomen; sides of the breast more olive and barred with black; lower flanks barred with black, and with buff bars at the tip of the feathers; under tail-coverts rufous cinnamon; primaries, primary-coverts, and bastard-wing uniform blackish, secondaries with some rufous marks on the outer webs; marginal under wing-coverts dark brown, the greater ones light grey, the central ones paler grey, nearly whitish; tail olive-brown: bill plumbeous, under mandible pale; feet dusky. Total length about 9 inches, wing 6 (5·5 in the original description!), tail 1·5, culmen 0·9, tarsus 1·62.

Young birds are less barred on the upper parts and have white tips to the median and greater upper wing-coverts.

Hab. Eastern Peru, on the Upper Amazons.

a.	Ad. sk.	Santa Cruz, E. Peru (*E. Bartlett*).	Salvin-Godman Coll. (Type of species.)
b.	♀ ad. sk.	Santa Cruz, Sept.	E. Bartlett [C.].
c.	♀ ad. sk.	Chamicuros, Jan.	E. Bartlett [C.].
d.	♀ juv. sk.	Yquitos, March (*H. Whitely*).	Salvin-Godman Coll.

22. Crypturus noctivagus.

Tinamus noctivagus, *Wied, Reise nach Bras.* i. pp. 160, 173 (1820), ii. pp. 111, 127, 145, 158 (1821); *Temm. Pl. Col., genre* Tinamou, sp. 7 (1826); *Less. Man.* ii. p. 205 (1828); *id. Tr. d'Orn.* p. 512 (1831); *Wied, Beitr.* iv. p. 504, tab. i. f. 1 (trachea and larynx) (1832); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 238 (1838); *G. R. Gr. Gen. B.* iii. p. 524, n. 7 (1844); *Hartl. Erst. Nachtr. Verz. Ges. Mus.* p. 17, n. 190 (1846); *Rchnb. Syn. Av.*, Gallinaceæ, t. 284. ff. 1561–62 (1848) (*ex Spix*); *id. J. f. O.* 1853, *Extrah.* p. 41; *G. R. Gr. List Gallinæ Brit. Mus.* p. 101, n. 25 (1867); *Euler, J. f. O.* 1867, pp. 189, 190, 198; *Pelz. Orn. Bras.* p. 293 (note), p. 453 (1871); *Gieb. Thes. Orn.* iii. p. 637 (1877).

Pezus zabelé, *Spix, Av. Bras.* ii. p. 62, t. 77 (Catingha) (1825).

Crypturus noctivagus, *Wagl. Syst. Av., gen.* Crypturus, sp. 6 (1827); *Tsch. Arch. f. Naturg.* 1844, i. p. 307, n. 277 (Peru); *Thienem. Fortpflanz.* p. 27, t. v. f. 4 (egg) (1845); *Tsch. Faun. Per., Aves*, pp. 46, 283 (1846); *Licht. Nom. Av.* p. 87 (1854); *Burm. Th. Bras.* iii. p. 320 (1856); *Euler, J. f. O.* 1867, p. 418 (egg); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 47 (Lagoa dos Pitos, near Lagoa Santa); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 12 (Brazil) (1873); *Cab. J. f. O.* 1874, p. 230; *Schleg. Mus. P.-B.*, Tinami, p. 33 (Montevideo, *Mus. Berol.*; Bahia, *Mus. Vienna*) (1880); *Forbes, Ibis*, 1881, p. 360 (Garanhuns, N.E. Brazil); *Sclat. List Vert. An.* 8th ed. p. 545 (Zool. Gard.) (1883); *Berl. u. Jher. Zeitschr. ges. Orn.* 1885, p. 183 (Taquara do Mundo novo); *Salv. Ibis*, 1886, p. 181 (part., critical); *Tacz. Orn. Pér.* iii. p. 302, *Tables*, p. 107 (1886); *Sclat. Ibis*, 1890, p. 82 (quintocubital); *Hartert, Kat. Vogelsamml.* p. 206, n. 3095 (1891).

Nothocercus noctivagus, *Bp. Compt. Rend.* xlii. p. 881, n. 334 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 331 (1856); *G. R. Gr. Hand-list*, iii. p. 5, n. 9892 (1871); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Rio Grande) (1890).

Adult male. Anterior half of the crown slaty black, changing into vinous brown on the posterior half and nape; a broad rufescent superciliary stripe extending down to the sides of the occiput; postocular region vinous brown; cheeks and throat rufescent; mantle dusky brown, the hidden part of the feathers slaty grey; back brown, freckled with narrow dusky bars; rump and upper tail-coverts rufous-chestnut, barred with black, the bars narrower than the intervening rufous-chestnut ones; lower fore neck and crop-region distinctly grey; breast rufous, sides greyish, abdomen buff; flanks rufescent, barred with greyish brown; under tail-coverts rufescent, freckled with irregular blackish lines; upper wing-coverts olive-brown, freckled with brown marks and irregular rufescent bars and marks; primaries greyish brown; bastard-wing, primary-coverts, and secondaries slaty grey, the latter tinged with olive-brown and banded with bar-like rufescent bars on the outer web; marginal under wing-coverts greyish brown, the last row light grey, the central ones white; tail-feathers slate-grey at the base, on the apical half rufous freckled with irregular black lines: "iris brown-yellow; bill dark grey-brown horn-colour, blackish on the culmen, base of the lower mandible whitish; legs pale dusky ochreous yellow" (*Wied*). Total length about 13 inches, wing 7·4, tail 2·4, culmen 1·1, tarsus 2·2.

Female. Differs from the male in having the wings regularly and distinctly barred with yellowish buff; the rump and upper tail-coverts are more distinctly barred, the black bars being better defined and broader than the intervening chestnut bars, besides on the upper tail-coverts the light bands are paler, yellowish buff or rufescent; sides and flanks more distinctly barred with brown-black, the bars not being confined to the flanks, but extending to the sides of the breast. Total length about 13 inches, wing 8, tail 2·6, culmen 1·2, tarsus 2·2.

Young male. "The whole of the upper parts with pale rusty-yellow dots, and between these with obsolete brown-black undulated marks; on the upper tail-coverts the yellowish extends on the edges of the feathers; lower parts pale brownish grey, washed with yellowish brown, marked all over with darker grey-brown zigzag obsolete cross-lines" (*Wied*).

Two specimens in the Turin Museum, which have been apparently kept in confinement, have the superciliary stripes and cheeks very pale, nearly whitish, the grey colour of the lower fore neck and breast more or less tinged with rufous, and the bars on the upper parts cover nearly the whole of the back. They are probably *females*.

Hab. Eastern Brazil, north to Garanhuns, south to Rio Belmonte. The localities Peru (*Tschudi*) and Montevideo (*Schlegel*) are open to doubt.

a, *b*. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.
c. ♂ ad. sk.	Lagos dos Patos, Rio Grande do Sul, Brazil (*H. Rogers*).	Salvin-Godman Coll.

23. Crypturus dissimilis.

? Crypturus noctivagus, *Cab.* (*nec Wied*) *in Schomb. Reis. Brit. Guian.* iii p. 748 (Guiana) (1848); *Salvin, Ibis*, 1886, p. 181 (part., critical).

Adult male. Similar to the male of *C. noctivagus*, but smaller, and wanting the distinct pale superciliary stripe; upper parts more olive, especially the upper wing-coverts, rump, and upper tail-coverts; the feathers of the rump olive-brown, with narrow blackish edges; the upper tail-coverts olive, with incomplete black bars, and narrow pale buff bars near the tip; the breast of a paler rufous than in *C. noctivagus*. Total length about 12·5 inches, wing 7, tail 1·9, culmen 1, tarsus 1·9.

Female. Differs from the female of *C. noctivagus* in wanting the pale superciliary stripe, in the paler rufous colour of the breast, in the rump and upper tail-coverts blacker, the black bars being broader, while the light bars are paler, being not rufous-chestnut, but buff, so that they are much more distinct.

The *male* of this species is very similar also to the male of *C. erythropus*, while the female is very much like that of *C. cinnamomeus*, especially in the barrings of the wings, rump, and upper tail-coverts.

Hab. British Guiana.

a–*g*. ♂ ♀ ad. sk.	Quonga, British Guiana, Oct., Nov. (*H. Whitely*).	Salvin-Godman Coll. (Types of species.)
h. Ad. sk.	Corentyne R., British Guiana, Nov. (*E. F. im Thurm*).	Salvin-Godman Coll.

24. Crypturus cinnamomeus.

Tinamus (Nothura) cinnamomea, *Less. Rev. Zool.* 1842, p. 210 (La Union, Centre Amérique) (type examined).

Tinamus cinnamomeus, *G. R. Gr. Gen. B.*, App. p. 25 (1849); *Scl. & Salv. Ibis*, 1859, p. 226 (La Union, San Salvador); *Gieb. Thes. Orn.* iii. p. 636 (1877).

Tinamus dellattrii, *Bp. Compt. Rend.* xxxviii. p. 663 (Nicaragua) (1854); cf. *Ibis*, 1868, p. 337.

Nothocercus delattrii, *Bp. Compt. Rend.* xlii. p. 881, n. 332 (=cinnamomeus, *Less.*?) (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 329 (1856); *G. R. Gr. Hand-list*, iii. p. 5, n. 9888 (1871).

Nothocercus sallæi, *Bp. Compt. Rend.* xlii. p. 881, n. 333, p. 954, n. 9 (Vera Cruz, Mexico) (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 330, p. 16, n. 12 (1856); *Sclat. P. Z. S.* 1856, p. 310 (Cordova, Vera Cruz); *Pelz. Orn. Bras.* p. 293 (note, type!) (1871); *G. R. Gr. Hand-list*, iii. p. 4, n. 9882 (1871); *Lawr. Bull. U.S. Nat. Mus.* no. 4, p. 45 (1875) (Sta. Efigenia); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Mexico) (1890).

Tinamus sallæi, *Sclat. P. Z. S.* 1859, pp. 369 (Jalapa), 392 (Playa

Vicente); *G. E. Taylor, Ibis*, 1860, p. 312 (Honduras); *Salv. Ibis*, 1861, p. 356 (Chisec, *errore*), 1866, p. 296 (Pacific coast-region of Guatemala); *G. R. Gr. List Gallinæ Brit. Mus.* p. 100 (Cordova, Mexico; Honduras) (1867); *Gieb. Thes. Orn.* iii. p. 637 (1877); *Sumichrast. La Nat.* v. p. 229 (1881) (Vera Cruz & Tehuantepec); *Nehrk. J. f. O.* 1881, p. 69 (egg, Yucatan); *Rchnw. J.f. O.* 1882, p. 11 (Zool. Gart.).

Crypturus sallæi, *Sclat. & Salv. Exot. Orn.* p. 89, pl. xlv. (1868), cf. *Ibis*, 1868, p. 337; *Lawr. Ann. Lyc. N. Y.* ix. p. 141 (San José) (1869); *Frantz. J. f. O.* 1869, p. 374 (Esparza, Costa Rica); *Sclat. & Salv. Nom. Av. Neotrop.* p. 152, n. 11 (Mexico, Amer. Centr., Colombia et Venezuela) (1873); *Salv. Ibis*, 1874, p. 328 (Yucatan and Guatemala); *Sumichrast, Bull. U.S. Nat. Mus.* 1876, p. 45; *Schleg. Mus. P.-B.*, Tinami, p. 31 (Bogota! *Landsberge*; Surinam!) (1880); *Zeled. Cat. Av. Costa Rica*, p. 29 (1882); *Nutting, Pr. U.S. Nat. Mus.* v. p. 409 (1882) (La Palma, Costa Rica); *Boucard, P. Z. S.* 1883, pp. 434, 462 (Yucatan); *Zeled. Pr. U.S. Nat. Mus.* 1885, p. 112 (Costa Rica); *Ferarri, Pr. U.S. Nat. Mus.* ix. p. 180 (1886) (Jalapa); *Zeled. Ann. Mus. Nac. Rep. Costa Rica*, 1887, p. 128.

Crypturus strigulosus, *Sclat. & Salv.* (*nec Temm.*) *P. Z. S.* 1869, pp. 252, 254 (Cerro Azul of Guigue, Venezuela).

Adult male. Upper part of the head anteriorly brown-black, posteriorly brown-chestnut with obsolete blackish bars; sides of the head, including lores, and sides of the neck rufescent; throat white; lower neck greyish olive-brown, with obsolete dusky linear bars; back olive-brown, with black undulated bars, very narrow in the interscapular region, and gradually becoming broader on the lower back and rump, very broad on the upper tail-coverts, which are crossed also with pale yellowish-buff bars; breast bright rufous, abdomen paler; sides of the breast slightly waved with dusky lines; flanks barred with broader black bands and narrower pale reddish bands; tips of the feathers broadly yellowish buff; under tail-coverts basally black, buff at the tip, the intermediate portion buff with irregular oblique black lines; smaller upper wing-coverts like the back, the median and greater ones blackish brown, distinctly barred with yellowish buff; primaries, primary-coverts, and bastard-wing uniform greyish brown, nearly black; secondaries marked with yellowish or olive on the outer web, tertials barred with olive; under wing-coverts greyish brown, the inner ones light grey, tipped with pale rufescent, the last row uniform pale grey, like the under surface of quills; tail-feathers brown, tinged with olive-brown on the outer web, and regularly crossed with several narrow rufescent bars; "upper mandible brown, lower mandible and feet yellow" (*Sclater*); "iris brown" (*Nutting*). Total length about 12 inches, wing 6·75, tail 2, culmen 1·0–1·1, tarsus 1·9.

Female. Differs from the male in the greater development of the transverse markings, which in this sex cover the top of the head, the front of the breast, and the whole of the sides of the body below.

Young. Upper part of the head and nape with black and rufous-brown bars; upper parts greyish olive, but more greyish on the

mantle, crossed with black irregular bars; upper wing-coverts with broad black and narrow pale yellowish bars; throat white; lower fore neck and breast olive, changing into ochreous on the breast, paler on the abdomen, the feathers with black marks near the tip, those of the flanks with broad black bars; under tail-coverts pale fulvous, varied with black.

Hab. Southern Mexico, Central America, Colombia?, and Venezuela.

a. Ad. sk.	Mexico.	Salvin-Godman Coll. (? Type of *Tinamus sallæi*, Scl.)
b. Ad. st.	Cordova, Mexico.	Purchased.
c. ♂ ad. sk.	Côte ferme, Mexico.	Salvin-Godman Coll.
d, *e*. ♂ ad. sk.	Vera Cruz, Mexico, Nov. (*Boucard*). (Specim. *d* fig. in Exot. Orn. pl. xlv.)	Salvin-Godman Coll.
f. Ad. sk.	Atoyac, Vera Cruz, April (*D. W. Smith*).	Salvin-Godman Coll.
g. ♀ juv. sk.	Plan del Rio, Canton de Jalapa, Aug. (*F. Ferrari-Perez*).	Salvin-Godman Coll.
h. Juv. sk.	Coatepec, Jalapa, Nov. (*Trujillo*).	Salvin-Godman Coll.
i. Ad. sk.	Northern Yucatan (*G. F. Gaumer*).	Salvin-Godman Coll.
k–n. ♀ ad. et ad. sk.	Izamal, Yucatan (*G. F. G.*).	Salvin-Godman Coll.
o. Ad. sk.	Peto, Yucatan, April (*G. F. G.*).	Salvin-Godman Coll.
p. Ad. sk.	Buctzotz, Yucatan April (*G. F. G.*).	Salvin-Godman Coll.
q. ♀ ad. sk.	Barranco-Hondo, Guatemala, Oct. (*O. Salvin*).	Salvin-Godman Coll.
r. ♂ ad. sk.	Volcan de Agua, above San Diego, Guatemala, Nov. (*O. S.*).	Salvin-Godman Coll.
s. ♀ ad. sk.	Medio Monte, Guatemala, Aug. (*O. S.*).	Salvin-Godman Coll.
t, *u*, *v*. Ad. sk.	El Zapote, Costa Grande, Guatemala (*O. S.*). (Specim. *u* fig. in Exot. Orn. pl. xlv.)	Salvin-Godman Coll.
w. ♂ ad. sk.	La Libertad, San Salvador, Febr. (*W. B. Richardson*).	Salvin-Godman Coll.
x, *y*. ♂ ad. et imm. sk.	Volcan de San Miguel, San Salvador (3000 feet) (*W. B. R.*).	Salvin-Godman Coll.
z. Ad. sk.	Honduras.	Dyson Coll.
a'. ♂ ad. sk.	Leon, Nicaragua (*W. B. R.*).	Salvin-Godman Coll.
b'–e'. ♂ ♀ ad. et imm. sk.	Chinandega, Nicaragua, March, June (*W. B. R.*).	Salvin-Godman Coll.
f', *g'*. ♂ ♀ ad. sk.	El Volcan, Chinandega, Nicaragua, April (*W. B. R.*).	Salvin-Godman Coll.
h', *i'*. Ad. sk.	Bebedero, Nicoya, Costa Rica (*Arcé*).	Salvin-Godman Coll.
k'. Ad. sk.	Venezuela (*Spence*).	Salvin-Godman Coll.
l'. ♂ ad. sk.	Cerro Azul Guigue, Venezuela, Nov. (*A. Goering*).	Salvin-Godman Coll.

25. Crypturus boucardi.

Tinamus boucardi, *Sallé, MS.*; *Sclat. P. Z. S.* 1859, p. 391 (Oaxaca) *Salv. Ibis*, 1861, p. 356 (Centr. Am.), 1865, p. 195; *G. R. Gr. List Gallinæ Brit. Mus.* p. 100 (Guatemala) (1867); *Pelz. Orn. Bras.* p. 293 (note) (1871); *Gieb. Thes. Orn.* iii. p. 635 (1877); *Sumichrast, La Nat.* v. p. 229 (1881) (Uvero); *Pelz. u. Lor. Ann. naturh. Hofmus.* iii. p. 51 (1888).

Tinamus sallæi (*err.*), *Salv. Ibis*, 1861, p. 356.

Crypturus boucardi, *Sclat. & Salv. Exot. Orn.* p. 91, pl. xlvi. (1868); *Salv. Ibis*, 1870, p. 115; *Sclat. & Salv. P. Z. S.* 1870, p. 838 (San Pedro, Honduras); *iid. Nom. Av. Neotrop.* p. 152, n. 10 (1873); *Boucard, P. Z. S.* 1878, p. 41; *Schleg. Mus. P.-B.*, Tinami, p. 26 (1880); *Zeled. Cat. Av. Costa Rica*, p. 29 (1882); *id. Pr. U.S. Nat. Mus.* 1885, p. 112 (Costa Rica); *id. An. Mus. Nac. Rep. Costa Rica*, 1887, p. 128.

Nothocercus boucardi, *G. R. Gr. Hand-list*, iii. p. 4, no. 9884 (1871) *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Guatemala) (1890).

Crypturus, sp., *Richmond, Proc. U.S. Nat. Mus.* xvi. p. 526 (Escondido, Nicaragua) (1893).

Adult male. Head, neck, mantle, and upper breast slaty greyish black, upper part of the head blacker; throat dark grey; back, rump, and upper tail-coverts chestnut olive-brown, with obsolete blackish at the tips of the feathers; upper wing-coverts more olive-brown, freckled with irregular black lines and with a few ochreous dots on the edges of the feathers; lower breast slaty grey, with an ochreous wash, more conspicuous on the sides of the abdomen; middle of the abdomen slate-brown, the feathers broadly edged with ochreous buff; flanks with black and ochreous bars, the tips of the feathers ochreous; under tail-coverts rufescent, thickly barred with black; bastard-wing, primary-coverts, and quills slaty black, the outer web of the tertials like the upper wing-coverts, the secondaries tinged with reddish olive-brown near the edge of the outer web; tail rufous brown, barred with black; upper mandible horn-black, the lower pale in dry skin; feet pale yellowish brown. Total length about 11 inches, wing 6·75, culmen 1·05, tarsus 2·05.

Female. Similar to the male, but paler, and besides it differs in having the lower back, rump, upper tail-coverts, secondaries, and upper wing-coverts strongly banded across with light yellowish brown.

While the very old male from Chimalapa, Mexico, described above has the throat decidedly dark grey, all the other specimens from British Honduras, Guatemala, and Costa Rica have the throat whitish or even pure white.

Hab. Southern Mexico, and Central America, south to Costa Rica.

a. ♂ ad. sk.	Teotalcingo, S. Mexico, March (*Boucard*).	Salvin-Godman Coll. (Type of species.)
b. ♂ ad. sk.	Chimalapa (4000 feet), Tehuantepec, Mexico, March (*W. B. Richardson*).	Salvin-Godman Coll.
c, *d*. Ad. sk.	British Honduras (*Blancaneaux*).	Salvin-Godman Coll.

e, f. Ad. st.	Choctum, Vera Paz, Guatemala (*O. Salvini*).	Osbert Salvin, Esq. [P.].
g–k. ♀ ad. et ad. sk.	Choctum, Guatemala, Jan. (*O. S.*).	Salvin-Godman Coll.
l. Ad. sk.	Costa Rica (*Carmiol*).	Salvin-Godman Coll.

26. Crypturus columbianus.

Crypturus boucardi, *Sclat. & Salv. P. Z. S.* 1875, p. 548 (Neche, Antioquia).

Male (*adult?*). Anterior half of the crown black, changing into chestnut on the posterior half, nape, and sides of the neck: mantle chestnut-brown, changing into olive-brown on lower back, rump, and upper tail-coverts, which are barred with black, the upper tail-coverts more olivaceous and with rufescent bars or marks; upper wing-coverts olive-brown, with narrow black bars, the greater ones with pale fulvous marks; malar region rufous; throat white; lower fore neck, breast, and abdomen greyish brown, washed with rusty; middle of the abdomen pale brown, the feathers broadly tipped with buff; feathers of the flanks with subapical blackish and apical buff bars; under tail-coverts rufescent, barred with black; bastard-wing, primary-coverts, and quills brown-black; secondaries with brown and buff marks on the outer web; under wing-coverts brown, the last row grey, the central ones greyish, with white edges; tail olive-brown, freckled with dusky bars: bill dusky above, pale below; feet in the dry skin pale yellowish. Total length about 11·5 inches, wing 6·6, culmen 1·1, tarsus 1·9.

This species is allied to *C. boucardi*, but, judging from the only specimen known, differs in having the hind part of the head, the nape, and sides of the head chestnut, the neck and breast are without the dark slaty-grey tinge, the wings are barred with black, and the style of barring on the wings is different, the light yellowish-brown bars so conspicuous in the female of *C. boucardi* being absent.

Hab. Neche, Antioquia.

a. ♂ (ad.?) sk.	Neche, Antioquia (*T. K. Salmon*).	Salvin-Godman Coll. (Type of species.)

27. Crypturus mexicanus.

Upper parts olive-brown vermiculated with blackish, the vermiculations becoming stronger and more bar-like on the lower back and rump; anterior half of the crown blackish; lores and sides of the forehead greyish; occiput and sides of the head posteriorly rufescent, the latter paler; throat pure white, lower fore neck and sides of the body olive-greyish; breast clear rufous buff; feathers of the abdomen broadly white at the tip, before this a dusky bar separates the white tip from the brownish base; feathers of the flanks with brownish subapical bars and whitish bars at the tip; under tail-coverts rufous, barred with black and tipped with whitish buff; upper wing-coverts like the back, only paler and more olive; bastard-wing, primary-coverts, and primaries uniform slate-greyish,

the secondaries tinged with olive on the edge of the outer web; marginal under wing-coverts greyish brown, the last row pale grey, the central ones whitish; tail-feathers olive-brown, freckled with brown lines: bill horn-brown above, pale below; feet pale horn-colour in dry skin. Total length about 12 inches, wing 7, tail 2·2, culmen 1–1·1, tarsus 1·8–1·9.

Female. Similar to that of *C. cinnamomeus*, but not so brightly rufous vinous on the occiput and nape, and not barred with black on the lower fore neck and sides of the breast; besides it differs in having the tail-feathers barred only on the inner web.

Young male. Less black on the forehead and less rufescent on the occiput; the breast more greyish olive; upper parts more olive and more strongly barred with black; the upper wing-coverts with broad pale buff edges, especially the greater ones.

Hab. North-eastern Mexico.

a–d. ♂ ♀ ad. sk.	Tampico, E. Mexico, Feb., June (*W. B. Richardson*).	Salvin-Godman Coll.
e. Ad. sk.	Tamaulipas, Mexico (*W. B. R.*).	Salvin-Godman Coll.
f, g. ♂ ad. et juv. sk.	Sierra Madre, above Ciudad Victoria, Tamaulipas (*W. B. R.*).	Salvin-Godman Coll.
h, i. Ad. sk.	Hacienda de los Atlixcos, Mexico, March (*F. D. Godman*).	Salvin-Godman Coll.
k. ♂ ad. sk.	Monte Verde, Mexico, June.	Salvin-Godman Coll. (Types of species.)

28. Crypturus occidentalis, sp. n.

? Nothocercus sallæi, *Lawr. Mem. Bost. Soc. N. H.* ii. p. 307 (1874) (Mazatlan) (*nec Bonap.*).

Similar to *C. mexicanus*, but the brown-olive upper parts more finely and thickly vermiculated with black; the occiput and sides of the head posteriorly olive-brown, but not rufescent; the lower fore neck and entire breast greyish, with no rufous tinge; only the abdomen pale rufescent; the feathers of the latter not distinctly tipped with white; if constant, the upper wing-coverts with some buff dots, and the secondaries more olive, freckled with black on the outer web and with traces of buff irregular barrings: bill and feet as in *C. mexicanus*. Total length about 11 inches, wing 7, culmen 1, tarsus 1·8.

Female. Unknown, but probably similar to that of *C. mexicanus*.

Hab. Territory of Tepic, North-western Mexico.

a. ♂ ad. sk.	San Blas, Tepic, W. Mexico, May (*W. B. Richardson*).	Salvin-Godman Coll. (Type of species.)

29. Crypturus transfasciatus.

Crypturus transfasciatus, *Sclat. & Salv. P. Z. S.* 1878, p. 141, pl. xiii. (Santa Rosa, Ecuador); *Berl. & Tacz. P. Z. S.* 1884, pp. 282, 312 (Guayaquil); *Tacz. & Berl. P. Z. S.* 1885, p. 121.

"Supra ochraceus, dorso toto et alis extus nigro-transfasciatis, cervice postica murino-brunnea; pileo nigro, ochraceo-brunneo transfasciato; superciliis, gula, et abdomine medio albis; cervice ima et pectore griseis; hypochondriis et tectricibus caudæ inferioribus cervinis, nigro transfasciatis; rostro corneo, mandibulæ basi flavicante, pedibus flavis: long. tota 12, alæ 6·2, caudæ 2·1, tarsi 2·9 * (an potius 1·9 ?), rostri a rictu 1·5" (*Salvin et Sclater*).

Hab. Western Ecuador.

The type of this *Crypturus* was obtained at Santa Rosa, Ecuador, by Prof. Steere. I add the description of a bird which I think belongs to the same species:—

Upper parts black, barred with ochreous; upper part of the head irregularly barred with rufous chestnut and black; forehead whitish with black marks; superciliary band, lores, throat, and lower parts whitish; posterior part of the checks and ear-coverts chestnut; lower neck and breast tinged with dull greyish; mantle dull chestnut barred with black; light bars of rump and upper tail-coverts rufescent; sides and flanks pale buff, with crescentic black bars; under tail-coverts buff, with black bars towards the base; bastard-wing and primaries uniform greyish brown; secondaries with buff bar-like marks on the outer web; under wing-coverts dark grey, the last row light grey, the central ones whitish; tail regularly barred with black and rufous buff: bill in dry skin horn-brown, lower mandible pale; feet yellowish. Total length about 10 inches, wing 6, tail 2, culmen 1·05, tarsus 1·85.

a. Ad. sk. Balzar Mountains, W. Ecuador (*Illingworth*). Salvin-Godman Coll.

4. RHYNCHOTUS.

	Type.
Rhynchotus, *Spix, Aves Bras.* ii. p. 60 (1825)	R. rufescens.
Nothurus, *Sw. Class. B.* ii. p. 345 (1837)	R. rufescens.
Rhynchotis, *Rchnb. Syn. Av.*, Gallinaceæ, t. 287. ff. 1579–80 (1848) (= Rhynchotus).	

Range. South America east of the Andes, from Brazil and Bolivia to the Argentine Republic.

Key to the Species.

a. Neck and breast uniform rufous, more or less bright ..... *rufescens*, p. 548.

b. Neck rufous with longitudinal black streaks; middle of the breast with deep rufous crescentic marks ..... *maculicollis*, p. 550.

* The authors in their remarks concerning this species say that in size it approaches *C. salleei*, so that it is quite evident that the tarsus cannot have the length of 2·9 inches, which is seldom to be found even in the larger members of the genus *Tinamus*.

1. Rhynchotus rufescens.

Inambú guazú, *Azara, Apunt.* iii. p. 34, n. 326 (1805).

Tinamus rufescens, *Temm. Pig. et Gallin.* iii. pp. 552, 747 (1815); *id. Pl. Col.* 412 (1826); *id. ibid., genre* Tinamou, sp. 1 (1826); *Less. Man. d'Orn.* ii. p. 203 (1828); *id. Dict. Sc. Nat.* lix. p. 207 (1829); *id. Compl. de Buff., Ois.* 2nd ed. p. 237 (1838); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 87 (1839); *Bolle, J. f. O.* 1856, p. 167 (Zool. Gard.); *Gulliver, P. Z. S.* 1875, p. 488; *Gieb. Thes. Orn.* iii. p. 637 (syn. emend.) (1877).

Cryptura guazu, *Vieill. N. D.* xxxiv. p. 103 (1819) (*ex Azara*).

Tinamus guazu, *Vieill. Enc. Méth.* i. p. 370 (1820).

Crypturus rufescens, *Licht. Verz. Doubl.* p. 67, n. 702 (San Paulo) (1823); *Darw. Zool.* '*Beagle*,' iii. *Birds*, p. 120 (1841); *Thienem. Fortpflanz.* p. 24, t. v. f. 5 (1846).

Rhynchotus fasciatus, *Spix, Aves Bras.* ii. p. 60, t. 76 *a* (San Paulo et Minas Geraes) (1825); *Less. Tr. d'Orn.* p. 515 (syn. emend.) (1831).

Rhynchotus rufescens, *Wagl. Syst. Av., gen.* Rhynchotus, sp. 1 (1827); *id. Isis*, 1829, p. 747; *G. R. Gr. Gen. B.* iii. p. 525, n. 1 (1844); *id. List B. Brit. Mus.* iii. p. 52 (1844); *Hartl. Ind. Azar. Apunt.* p. 21, n. 326 (1847); *Licht. Nom. Av.* p. 87 (1854); *Burm. Th. Bras.* iii. p. 327 (1856); *Bp. Compt. Rend.* xlii. p. 881, n. 317 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 336 (1856); *Burm. J. f. O.* 1858, p. 161, 1860, p. 259; *id. La Plata-Reise*, ii. p. 498 (Paraná, Rosario, Tucuman) (1861); *G. R. Gr. List Gallinæ Brit. Mus.* p. 102 (Maldonado) (1867); *Sclat. P. Z. S.* 1869, p. 628 (breeding); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 51 (Minas Geraes); *Pelz. Orn. Bras.* p. 294 (Mattodentro, Campo von Tatutuba, Campo bei S. José, Ypanema, Ytararé), pp. 454, lvi (1871); *Nathus. Zeitschr. wiss. Zool.* xxi. pp. 348, 354, t. xxvi. ff. 12, 13 (egg structure) (1871); *G. R. Gr. Hand-list*, iii. p. 5, n. 9895 (1871); *Sund. Meth. nat. Av. disp. Tent.* p. 119 (1872); *Sperl. Ibis*, 1872, p. 77; *Huds. & Sclat. P. Z. S.* 1872, p. 546 (Buenos Ayres); *id. Ibis*, 1873, p. 131 (note); *Garrod, P. Z. S.* 1873, p. 476 (carotids), p. 642 (muscles); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 1 (1873); *Cab. J. f. O.* 1874, p. 95 (breeding, Zool. Gard.); *Alix, Journ. Zool.* v. pp. 411, 112 (myology) (1876); *Durnf. Ibis*, 1877, p. 203; *Forbes, P. Z. S.* 1877, p. 307 (bursa Fabricii); *Nathus. J. f. O.* 1879, p. 258 (egg); *Gibson, Ibis*, 1880, p. 167; *Schleg. Mus. P.-B.*, Tinami, p. 35 (1880); *Forbes, Ibis*, 1881, p. 360 (N.E. Brazil); *Salv. Cat. B. Strickl. Coll.* p. 641, n. 3114 (1882); *Dalgleish, Pr. R. Phys. Soc. Edinb.* vi. p. 232 (Centr. Uruguay) (1882); *Sclat. List Vert. An.* 8th ed. p. 546 (1883) (Zool. Gard.); *Barrows, Auk*, 1884, p. 313 (Entrerios, Lower Uruguay); *Buteman, The Field*, 23rd Feb. 1884, and 12th Sept. 1885 (introduced into Essex); *Bedd. P. Z. S.* 1885, p. 844 (visceral anatomy); *Berl. J. f. O.* 1887, p. 127, n. 353; *A. Newt. Enc. Brit.* 9th ed. xxiii. p. 403, with cut (1888); *Harting, Essex Nat.* 1888, pp. 102–109, cut; cf. *t. c.* p. 206 (introduced into Essex); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora); *Burm. Anal. Mus. Nac. Buen. Air.* iii. p. 245 (Bahia Blanca) (1888); *Sclat. & Huds. Argent. Orn.* ii. p. 209 (1889); *Tristr. Cat. Coll. B.* p. 2 (1889); *Sclat. Ibis*, 1890, p. 82 (quintocubital); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Brazil) (1890); *Evans, Ibis*, 1891, p. 83 (incubation); *Frenzel, J. f. O.* 1891, p. 123; *Berl. ibid.* p. 363; *Sharpe, Cat. Osteol. Specim. B. C. S.* iii. p. 414 (1891); *Hartert, Kat. Vogelsamml.* p. 206, n. 3094 (1891),

G. Kerr, *Ibis*, 1892, p. 151 (Lower Pilcomayo); *Holland*, *t. c.* p. 214 (Argentine); *Allen*, *Bull. Amer. Mus. N. H.* v. pp. 151, 158 (Matto Grosso, egg) (1893); *Aplin*, *Ibis*, 1894, p. 212; *Blaauw*, *Bull. Brit. Orn. Club*, no. xxviii. p. xlii (breeding at 'sGraveland) (1895).

Nothurus rufescens, *Sw. Class. B.* ii. p. 345 (1837).

Rhynchotis rufescens, *Rchnb. Syn. Av.*, Gallinaceæ, t. 287. ff. 1579–80 (1848); *Bartl. P. Z. S.* 1867, p. 687 (breeding), 1868, p. 114, pl. xii. f. 1 (chick), f. 2 (egg); *Ed. Ibis*, 1873, p. 131 (note); *Sorby*, *P. Z. S.* 1875, pp. 357, 361 (egg); *Durnf. Ibis*, 1876, p. 166 (Argentine); *Withington*, *Ibis*, 1888, p. 473 (Lomas de Zamora); *Sclat. ibid.*; *id. Ibis*, 1894, p. 453.

Rhynchotes rufescens, *Mairet*, *Bull. Soc. Acclim.* 1871, p. 594 (breeding in confinement).

Adult. Head, neck, and breast rufous, upper part of the head black, the feathers more or less edged with rufous; a dusky narrow stripe from the corner of the mouth to the ear-coverts; throat pale rufous, nearly white; back, rump, upper tail-coverts, and upper wing-coverts pale greyish brown, with broadish black bars and others narrower, whitish; lower flanks and abdomen greyish, with brown and whitish bars, the latter somewhat narrower; bastard-wing, primary-coverts, and quills uniform bright cinnamon-rufous; tertials greyish, barred with brown and buff; under wing-coverts uniform rufous; tail grey, with black and whitish bars, the latter much narrower. Total length 14–17 inches, wing 8–9, tail 2·5–2·75, culmen 1·6–1·7, tarsus 2·3–2·5.

Female. Similar, but larger.

Young in down. Head and neck rufescent, with longitudinal black stripes; sides of the head and throat white; upper parts striped with white and black; lower parts white.

It seems that there are three or four sufficiently distinct races:—

1st. A Southern one from the Argentine Republic: very little rufous on the neck and not at all on the breast; the black bars much broader and quite distinct on the flanks. The birds from Uruguay are similar but more rufous on the neck.

2nd. A Southern Brazilian race, has the neck decidedly rufous, and this colour covers also the upper part of the breast; the black bars, especially in the Matto Grosso birds, are much narrower.

3rd. A Bahia race, similar to the second, but with no black bars whatever on the flanks; also on the under tail-coverts and tail-feathers there is scarcely a trace of them, while the whitish bars are present.

Hab. Argentine Republic, Uruguay, Paraguay, Bolivia (?), and Brazil, as far north as Bahia.

a, *b*, *c*. Ad. st. et sk.	Brazil.	Lord Stuart de Rothsay [P.].
d. Ad. sk.	Interior of Bolivia (? !) (*Bridges*).	Eyton Coll.
e, *f*. ♂ ♀ ad. sk.	Near Paysandu, Uruguay, Aug.	Alan Peel, Esq. [P.].
g. Ad. st.	Maldonado.	Sir W. Burnett & Capt. Fitzroy [P.].

h. Ad. sk.	Montevideo (*Johnston*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Buenos Ayres, Aug. (*F. Withington*).	Sclater Coll.
k. Juv. sk.	Bred in captivity.	Zool. Soc.
l, m, n. Pull. st.	Bred in captivity (*Bartlett*).	Zool. Soc.
o, p. Skeletons.		Zool. Soc.

South Brazilian race.

q. ♀ ad. sk.	Ytararé, Brazil, Feb. (*Natterer*).	Salvin-Godman Coll.
r, s. ♂ ♀ ad. sk.	Chapada, Matto Grosso, May, Aug. (*H. H. Smith*).	Salvin-Godman Coll.

Bahian race.

t. Ad. sk.	Bahia, Brazil (*Wucherer*).	Salvin-Godman Coll.

2. Rhynchotus maculicollis. (Plate XIV.)

? Nocthura, sp., *Bridges, P. Z. S.* 1846, p. 9.
Rhynchotus maculicollis, *G. R. Gr. List Gallinæ Brit. Mus.* p. 102 (Bolivia) (1867); *id. Hand-list*, iii. p. 5, n. 9896 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 2 (1873); *id. P. Z. S.* 1879, p. 642 (Bolivia); *Schleg. Mus. P.-B.*, Tinami, p. 38 (Bolivia, *D'Orbigny*) (1880).
Tinamus maculicollis, *Gieb. Thes. Orn.* iii. p. 636 (1877).

(*Type*). Size of the larger specimens of *R. rufescens*, but differs in having longitudinal brown streaks on the neck, very prominent crescentic marks of a deep rufous on the middle of the breast, black and buff crescentic marks on the sides of the same, and the abdomen and thighs of a very pale buff-white, not greyish as in *R. rufescens*, and without any marks. Total length about 16 inches, wing 8·25, culmen 1·65, tarsus 2·1.

Two specimens, both *males*, collected by Garlepp at Tanampaya (Bolivia), have been sent to me for inspection by Graf von Berlepsch; they have not the very prominent crescentic marks of a deep rufous on the middle of the breast, which is rufescent with brown rufous irregular bars, edged with dusky; the abdomen and thighs are not of a very pale buff-white, but greyish buff.

Hab. Bolivia.

a. Ad. st.	Bolivia.	T. Bridges, Esq. [C.]. (Type of species.)

5. NOTHOPROCTA.

Type.

Nocthura, *Fraser, P. Z. S.* 1843, p. 115.
Nothoprocta, *Sclat. & Salv. Nom. Av. Neotrop.* pp. 153, 156 (1873) ..... N. perdicaria.

Range. From Ecuador to Chili and Argentine Republic.

Key to the Species.

a. Feathers of the back distinctly striped with white on the sides.
  a'. Outer primaries barred also on the inner web. *taczanowskii*, p. 551.
  b'. Outer primaries not barred on the inner web, which is uniform.
    a''. Breast grey.
      a'''. Under wing-coverts regularly barred with whitish buff and greyish brown; breast thickly spotted with white .. *cinerascens*, p. 552.
      b'''. Under wing-coverts not regularly barred.
        a^4. Outer web of the secondaries distinctly rufous, barred with brown.
          a^5. Upper parts dull greyish, the mesial part of the feathers of the back much blacker ..... *perdicaria*, p. 553.
          b^5. Upper parts of a finer grey, the mesial part of the feathers of the back less black ..... *coquimbica*, p. 554.
        b^4. Outer web of the secondaries not rufous, but brown, barred with rufescent or whitish buff..... *pentlandi*, p. 555.
    b''. Breast and abdomen rufescent ..... *curvirostris*, p. 556.
b. Feathers of the back not distinctly striped with white on the sides; breast grey, abdomen rufescent; radii of the upper tail-coverts rather long and disconnected.
  c'. Larger, wing 7·7 inches; upper wing-coverts with broader barrings ..... *ornata*, p. 557.
  d'. Smaller, wing 7 inches; upper wing-coverts with narrower barrings ..... *branickii*, p. 558.

1. Nothoprocta taczanowskii.

Nothoprocta taczanowskii, *Sclat. & Salv., Tacz. P. Z. S.* 1874, p. 564 (Maraynioc, C. Peru); *Sclat. & Salv. t. c.* pp. 679, 680, pl. lxxxiv. (Peru); *Tacz. Orn. Pér.* iii. p. 304, *Tables*, p. 107 (1886).
Nothoprocta godmani, *Tacz. Orn. Pér.* iii. p. 305 (immat. bird, Chachupata) (1886).

Adult male. Head dark greyish, changing into lead-grey on the lower fore neck and breast; feathers of the crown black, edged with white and tipped with brown; feathers of the back broadly black on the middle, with a whitish longitudinal stripe on each side, irregularly barred with brownish grey across the middle and at the tip; upper tail-coverts irregularly barred with white and variegated with black; cheeks variegated with black; throat dirty white, feathers of the lower fore neck with two white spots, which on the feathers of the breast become confluent and are surrounded with black; lower breast, sides, and flanks whitish brown, with greyish bars, edged with a narrow black line; middle of the breast and of the abdomen and under tail-coverts whitish; upper wing-coverts brown, with irregular black marks and irregular buff bars; pri-

maries black, with white marks on the outer web and buff bars on the inner one; secondaries barred with buff, and edged with whitish buff on the outer web; under wing-coverts brown, with buff marks, which on the greater ones become more bar-like: bill brown, with the lower mandible yellowish at the base; feet yellow; iris dark brown. Total length about 13 inches, wing 7·4, culmen 1·62, tarsus 1·8. (*Mus. Branicki.*)

Immature male. Much browner above, the bars and tips of the feathers of the back being brown with no grey; no lead-grey colour on the lower fore neck and breast, where the feathers are brown and have a black spot and white stripes on the sides; sides and flanks pale brown, each feather with a black spot; throat, middle of the breast, and abdomen whitish; upper wing-coverts like the feathers of the back, only paler; marks and bars on the quills more fulvous. Size smaller than the adult: wing 6·8, culmen 1·5.

Hab. Central and Southern Peru.

a. ♂ imm. sk.	Chachupata, 11,000 feet, S. Peru, Sept. (*H. Whitely*).	Salvin-Godman Coll. (Type of *Nothoprocta godmani*, Tacz.)

2. Nothoprocta cinerascens.

Nothura cinerascens, *Burm. J. f. O.* 1860, p. 259 (Tucuman); *id. La Plata-Reise*, ii. p. 498 (Cordova, Tucuman) (1861); *Schleg. Mus. P.-B.*, Tinami, p. 40 (note) (syn. emend.) (1880); *Salv. Ibis*, 1880, p. 364 (Tucuman); *White, P. Z. S.* 1883, p. 43 (Cordova).

Tinamus cinerascens, *Gieb. Thes. Orn.* iii. p. 635 (1877).

Nothoprocta cinerascens, *Cab. J. f. O.* 1878, p. 198 (Argentine); *Sclat. & Huds. Argent. Orn.* ii. p. 210 (1889); *Frenz. J. f. O.* 1891, p. 124; *Salvad. Boll. Mus. Zool. ed Anat. Comp. Tor.* x. no. 208, p. 24 (Salta) (1895).

Adult male. Upper parts greyish, irregularly barred with black, each feather of the back with two whitish stripes between the grey lateral edges and the mesial darker portion; upper tail-coverts irregularly barred with black, greyish brown, and whitish; a rather broad greyish superciliary stripe; cheeks white, thickly spotted with black, throat white; neck variegated with blackish and white spots; breast grey, freckled with irregular dusky lines, and ornamented with roundish white spots, more or less surrounded with dusky; abdomen white; sides, flanks, and under tail-coverts whitish, with broadish irregular brown bars; quills blackish, with whitish marks on the outer web, secondaries regularly barred with pale buff on the outer web; under wing-coverts regularly barred with whitish buff, the last or greater row uniform grey: "bill slate, under mandible and legs light slate; iris orange-red" (*Durnford*), or "amber" (*White*). Total length 12·6 inches, wing 7·4, culmen 1·1, tarsus 1·6.

Female. Similar to the male, but browner on the upper parts, besides the markings are coarser and the white spots on the breast more bar-like; size somewhat larger.

Specimens from Tucuman, perhaps *immature*, is smaller, and somewhat browner above.

Hab. Western Argentine Republic.

a. ♂ ad. sk.	Cosquin, Cordova, Argent. Rep. (*E. W. White*).	Salvin-Godman Coll.
b. ♀ ad. sk.	Vicinity of Mendoza (*Leybold*).	Salvin-Godman Coll.
c. Immat. (?) sk.	Tucumau, June.	H. Durnford, Esq. [C.].

3. Nothoprocta perdicaria.

Tetrao perdix, *Molina* (*nec Linn.*), *Sagg. Stor. Nat. Chili* (2nd ed.), p. 218 (1776).

Crypturus perdicarius, *Kittl. Mém. des Sav. étrang.* i. (1831) p. 192, t. 12; *Nathus. J. f. O.* 1879, p. 258 (egg).

Nocthura perdicaria, *Fraser, P. Z. S.* 1843, p. 115; *Bridges, ibid.*; *id. P. Z. S.* 1846, p. 9 (Chili).

Nothura perdicaria, *G. R. Gr. List B. Brit. Mus.* iii. p. 53 (part., specim. *b*, *c*) (1844); *Yarrell, P. Z. S.* 1847, p. 53 (egg); *Des Murs in Gay, Hist. de Chile*, i. p. 392 (1848); *Hartl. Naumannia*, 1853, p. 221; *Cass. U.S. Expl. Exped.* ii. *Birds*, p. 192 (1856); *Hartl. J. f. O.* 1857, p. 39; *Germ. Pr. Bost. Soc. N. H.* vii. 1860, p. 312; *Schleg. Mus. P.-B.*, Tinami, p. 40 (1880).

Tinamus perdicarius, *Hartl. Syst. Verz. Ges. Mus.* p. 105 (1844).

Rhynchotus perdix, *G. R. Gr. Gen. B.* iii. p. 525, n. 2 (1844); *Bp. Compt. Rend.* xlii. p. 881, n. 318 (1856); *Sclat. P. Z. S.* 1860, p. 97 (part., Chili); *Pelz. Reise Novara, Vög.* p. 113 (1865).

Rhynchotis perdix, *Rchnb. Syn. Av.*, Gallinaceæ, t. 287. ff. 1581–82 (1848).

? Nothura punctulata, *Des Murs in Gay, Hist. de Chile*, i. p. 391 (1848); *Bp. Compt. Rend.* xlii. p. 955 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 339, p. 26 (1856); *Sclat. P. Z. S.* 1867, p. 331; cf. *Sclat. & Salv. P. Z. S.* 1879, p. 642; *Waugh & Lataste, Act. Soc. Sc. Chili*, iv. p. lxxxviii, n. 28 (Penaflor) (1894).

Rhynchotus perdicarius, *Licht. Nom. Av.* p. 87 (1854); *Bp. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 337, p. 20 (1856); *G. R. Gr. List Gallinæ Brit. Mus.* p. 103, n. 4 (1867); *Sclat. P. Z. S.* 1867, pp. 331, 339 (Chili); *Pelz. Orn. Bras.* p. 294 (note) (1871); *G. R. Gr. Hand-list*, iii. p. 5, n. 9898 (1871); *Nathus. Zeitschr. wiss. Zool.* xxi. pp. 349–354, t. xxvi. ff. 14, 15, 16 (egg structure) (1871); *Sclat. List Vert. An.* 8th. ed. p. 547 (1883) (Zool. Gard.); *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Valparaiso) (1890).

Rhynchotes perdicarius, *Bp. Tabl. Parall. Gallin.* p. 19 (generic type) (1856).

? Rhynchotus punctulatus, *Sclat. P. Z. S.* 1867, p. 339; *Philippi, P. Z. S.* 1868, p. 532 (var. of *R. perdicarius*).

Nothurus perdicarius, *Sund. Meth. nat. Av. disp. Tent.* p. 119 (1872).

Nothoprocta perdicaria, *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 1 (1873); *iid. P. Z. S.* 1874, p. 680; *Salv. Cat. B. Strickl. Coll.* p. 641, n. 3117 (1882); *Sclat. Ibis*, 1890, p. 82 (quintocubital); *Hartert, Kat. Vogelsamml.* p. 206, n. 3100 (1891); *Berk. James, New List Chil. B.* p. 14, n. 253 (1892).

Tinamus perdix, *Gieb. Thes. Orn.* iii. p. 636 (1877).

? Nothoprocta punctulata, *Sclat. P. Z. S.* 1879, p. 461 (Chili).

Adult. General upper plumage greyish brown; feathers of the

pileum blackish in the middle; each feather of the back broadly edged with grey on both sides, and with two whitish stripes between the grey lateral edge and the dark mesial portion, the latter mostly black with irregular greyish-brown bars; throat and middle of the abdomen whitish with a buffish tinge; lower fore neck, breast, and sides grey, on the sides of the breast some feathers are like those of the upper parts; upper wing-coverts like the back, only the dark mesial portion narrower; primaries grey, regularly spotted with whitish on the outer web; secondaries brown, with rufous bars on the outer web, the inner web uniform brown; under wing-coverts pale brown tinged with rufous, the last row pure grey: bill in dry skin dusky, the base of the lower mandible pale; feet pale horn-colour. Total length about 12 inches, wing 6·5, culmen 1, tarsus 1·5.

Young in down. Upper parts variegated with pale brown and black, and conspicuously striped with white, some feathers having the narrow apical portion entirely white, while others have dull greyish bases, the subapical portion black, and the tips rufescent; sides of the head buffish white, with some black marks near the ear-coverts; throat pure white; remainder of the lower parts whitish, with some dusky marks showing through the tips. (*Santiago, Mus. Turin.*)

Hab. Northern and Central Chili.

a. ad. st.	Chili.	Lieut. Mawe, R.N. [P.].
b. ♂ ad. sk.	Chili.	Salvin-Godman Coll.
c. Pull. st.	Chili.	Purchased.
d. Ad. sk.	Central Chili.	H. Berkeley James, Esq. [P.].
e, f. ♂ ♀ ad. sk.	Maquehua, Chili, Aug.	H. Berkeley James, Esq. [P.].
g. Pull. sk.	Rio Bueno, Chili, Feb.	H. Berkeley James, Esq. [P.].
h. Ad. st.	Valparaiso.	Sir W. Burnett & Capt. Fitzroy [P.].
i. Skeleton.	Chili.	Purchased.

4. Nothoprocta coquimbica. (Plate XV.)

Nothura perdicaria, part., *G. R. Gr. List B. Brit. Mus.* iii. p. 53, specim. *a* (Coquimbo) (1844).

Rhynchotus cinerascens, *G. R. Gr.* (*nec Burm.*) *List Gallinæ Br. Mus.* p. 103 (Coquimbo) (1867); *id. Hand-list*, iii. p. 5, no. 9899 (1871).

Nothura cinerascens, *Sclat.* (*nec Burm.*) *P. Z. S.* 1867, p. 331 (Coquimbo).

Rhynchotus cinerascens, *Sclat. t. c.* p. 339 (Coquimbo).

? Nothura perdicaria, *Sclat. & Salv. Ibis*, 1870, p. 502 (eggs).

Nothoprocta perdicaria, *Sharpe* (*nec Kittl.*), *P. Z. S.* 1880, p. 18 (Coquimbo); *MacFarl. Ibis*, 1887, p. 202 (Coquimbo).

Similar to *N. perdicaria*, but of a clearer grey on the upper parts, the mesial brown part of the feathers of the upper parts much more grey; wings much more grey; lower fore neck and breast of a purer grey, nearly bluish. "Legs yellow" (*Coppinger*).

Hab. Coquimbo, S. Chili.

a. ♀ ad. st.	Coquimbo, Chili.	Sir W. Burnett & Capt. Fitzroy [P.].
b. ♂ ad. sk.	Coquimbo. June (*Dr. Coppinger*).	Voy. of H.M.S. 'Alert.'
c. ♂ ad. sk.	Coquimbo, June (*Dr. Coppinger*).	Salvin-Godman Coll. (Types of species.)

5. Nothoprocta pentlandi. (Plate XVI. *)

? Nothura punctulata, *Bp.* (*nec Des Murs*) *Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 339, p. 20 (part., Bolivia) (1856); ? *Schleg. Mus. P.-B.*, Tinami, p. 41 (Chili) (1880).

? Nothura curvirostris, *Bp. in Mus. Lugd.*; *id. Tabl. Parall. Gallin.* (*Extract*), p. 12 (1856) (*nomen nudum*).

? Rhynchotus punctulatus, *G. R. Gr.* (*nec Des Murs*) *List Gallinæ Brit. Mus.* p. 103 (Bolivian Andes) (1867); *id. Hand-list*, iii. p. 5 n. 9900 (1871).

Rhynchotus pentlandii, *G. R. Gr. List Gallinæ Brit. Mus.* p. 103 (Bolivia) (1867); *id. Hand-list*, iii. p. 5, n. 9901 (1871).

Nothoprocta pentlandi, *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 3 (1873); *id. P. Z. S.* 1874, p. 680; *Sclat. P. Z. S.* 1879, p. 461; *Sclat. & Salv. P. Z. S.* 1879, p. 642 (Andes of Bolivia, Sicasica, and Chiquitos); *Sclat. & Huds. Argent. Orn.* ii. p. 210 (1889); *Frenz. J. f. O.* 1891, p. 124 (Argentine); *Berl. J. f. O.* 1892, p. 456 (critical).

Tinamus pentlandi, *Gieb. Thes. Orn.* iii. p. 637 (1877).

Nothoprocta doeringi, *Cab. J. f. O.* 1878, p. 138 (Cordova); *Sclat. P. Z. S.* 1879, p. 461; *Sclat. & Salv. ibid.* p. 642; *White, P. Z. S.* 1883, p. 432 (Cosquin, Cordova); *Berl. J. f. O.* 1892, p. 456.

Nothura doeringi, *F. Schultz in litt.*, fide *Cab. J. f. O.* 1878, p. 198.

Nothoprocta moebiusi, *Berl. Ber. Ally. Deutschl. Orn. Ges.* 1892, p. 13 (juv., Bolivia); *id. J. f. O.* 1892, p. 455.

Similar to *N. perdicaria* and *N. coquimbica*, but much smaller. Forehead, sides of the head, fore neck, and breast bluish grey, the latter dotted with white; middle of the crown and occiput black, the feathers edged with brown and with a white stripe on the outer edge; upper plumage greyish brown, each feather of the back black, barred with brown along the middle, greyish on the sides, and with two whitish longitudinal stripes between the grey lateral edge and the dark mesial portion; throat, middle of the breast, and abdomen dusky whitish buff; sides and flanks greyish, dotted or barred with white and freckled with black vermiculations; under tail-coverts dull greyish, with traces of dusky bars; quills blackish: primaries spotted with whitish buff on the outer web; secondaries barred with buff; upper wing-coverts greyish brown, variegated with black marks and white spots; under wing-coverts greyish brown: bill in dry skins brown, with the base of lower mandible paler; feet pale colour, probably yellow in the living bird. Total length 9·5 inches, wing 6, culmen 1·1, tarsus 1·5.

* The Plate represents a bird probably not adult; the adult bird has the forehead, sides of the head, fore neck, and upper breast bluish lead-colour, the latter dotted with white.

Young (type of *N. moebiusi*, Berl.). No bluish-grey tinge on the head, neck, and breast; upper part of the head black, the feathers tipped with brown, and striped with whitish on the outer edge; sides of the head and throat whitish, the feathers tipped with black; upper parts much browner than in the adult, the feathers having broader brown tips and centres; lower parts pale brownish, the feathers of the breast, sides, and flanks with black marks and irregular bars, and with whitish stripes on the sides; the secondaries besides being barred are also edged with rufescent on the outer web; under wing-coverts blackish, edged with rufescent. Total length 9·5 inches, wing 5·25, culmen 0·9, tarsus 1·3.

I have very little doubt that the type of *N. moebiusi* is the young of the present species, especially as it has the same resemblance to the adult as the young of *N. taczanowskii*.

Hab. Bolivia and North-western Argentine.

a. Ad. st.	Andes of Bolivia.	J. P. Pentland [P.]. (Type of species.)
b. Ad. st.	Bolivian Andes.	T. Bridges, Esq. [C.].
c. ♂ ad. sk.	Sierra de Cordova (*Dr. A. Döring*).	Salvin-Godman Coll.

6. Nothoprocta curvirostris.

Rhynchotis perdix, ? *Sclat.* (*nec Mol.*) *P. Z. S.* 1860, p. 97 (Calacali and Puellaro, Ecuador).

Nothoprocta curvirostris, *Sclat. & Salv.* (*nec Bp.*) *Nom. Av. Neotrop.* pp. 153, 163 (Ecuador) (1873); *iid. P. Z. S.* 1874, p. 680; *Sorby, P. Z. S.* 1875, p. 361; *Taez. P. Z. S.* 1880, p. 213 (Cutervo, N. Peru), 1882, p. 49 (Chirimoto, N.E. Peru); *Berl. & Taez. P. Z. S.* 1884, p. 312 (Cechce, 10,000 feet, W. Ecuador); *Taez. & Berl. P. Z. S.* 1885, p. 123; *Taez. Orn. Pér.* iii. p. 306, *Tables*, p. 107 (1886); *Salv. Novit. Zool.* ii. p. 22 (near Cajamarca) (1895).

Tinamus curvirostris, *Gieb. Thes. Orn.* iii. p. 636 (1877).

Nothura curvirostris, *Schleg. Mus. P.-B.*, Tinami, p. 41 (note) (1880).

? Nothoprocta curvirostra peruviana, *Taez. Orn. Pér.* iii. p. 307 (1886).

Adult. Feathers of the upper parts along the middle black, with two white stripes on the sides, and variegated and barred with greyish brown; feathers of the upper part of the head black in the centre, edged with rufous brown, a few with a white stripe on the outer edge; lores, sides of the head, and throat whitish; feathers of cheeks partly rufous brown, and with a black stripe along the shaft, also the feathers of the throat, especially those round it, are similarly coloured; breast and abdomen rufescent; on the breast the feathers have two whitish spots near the tip and a subapical irregular dusky line; lower down the feathers are edged with whitish; the upper tail-coverts greyish olive-brown, with black and whitish bar-like marks, besides being dusted with black; upper wing-coverts pale brown, with bar-like whitish-buff marks, anteriorly and posteriorly edged with black; quills brown, outer primaries barred with whitish buff on the outer web; on the innermost primaries the bars are rufescent, and are more or less present

also on the inner web; secondaries regularly barred with black and rufous on the outer web; bastard-wing, primary-coverts, and greater wing-coverts barred with black and rufous on the outer web; marginal under wing-coverts brown, edged with rufous, the central ones rufous, the last row greyish brown: bill horn-brown, base of lower mandible yellow; feet apparently orange; iris dark brown. Total length about 10·5 inches, wing 6·5, culmen 1·1, tarsus 1·5.

Some specimens have the mesial black part of the feathers of the back more extended than others.

Young. Similar to the adult, but the feathers of the breast with broad black crescentic marks; the upper wing-coverts less freckled, rufous, with black bars and whitish marks.

Taczanowski has already remarked that Peruvian birds differ somewhat from Ecuadorian. In the specimens in the Museum, *d* and *e*, the black bars of the secondaries are comparatively narrower, and the innermost secondaries (tertiaries) are without that subterminal black bar which is so conspicuous in our specimens from Ecuador.

Hab. Ecuador and Peru.

a. Ad. sk.	Calacali, Ecuador (*Fraser*).	Salvin-Godman Coll.
b. ♀ juv. sk.	Puellaro, Ecuador (*Fraser*).	Salvin-Godman Coll. (Types of species.)
c. Ad. sk.	Matagan, Ecuador (*E. Buckley*).	Salvin-Godman Coll.
d. ♀ ad. sk.	Cajamarca, Peru, alt. 10,000 ft., May (*O. T. Baron*).	Salvin-Godman Coll.
e. ♂ ad. sk.	Cajabamba, Peru, alt. 10,000 ft., Jan. (*O. T. Baron*).	Salvin-Godman Coll.

7. **Nothoprocta ornata.** (Plate XVII.)

Rhynchotus ornatus, *G. R. Gr. List Gallinæ Br. Mus.* p. 102 (Bolivia) (1867); *id. Hand-list*, iii. p. 5, n. 9868 (1871).
Nothoprocta ornata, *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 2 (1873); *iid. P. Z. S.* 1874, p. 680, 1879, p. 642 (Bolivia).
Tinamus ornatus, *Gieb. Thes. Orn.* iii. p. 637 (1877).

Larger than *N. perdicaria*. Upper parts brownish grey, vermiculated and irregularly banded with black and fulvous white; the feathers of the back have no broad pale outer edges; top of head blackish, spotted with fulvous whitish, the feathers irregularly barred with black and fulvous; sides of head and throat whitish, with black specks, very few on the throat; breast grey, with numerous transverse bands of fulvous white; lower part of breast and sides buff; the abdomen buffy white; primaries brown, banded with buffy white on the outer web; secondaries brown, banded with buff, the outer web narrowly edged with buff; tail-feathers with buff and blackish transverse bands; the radii of the feathers disconnected. Total length 13·5 inches, wing 7·7, culmen 1, tarsus 1·5.

Hab. Bolivia.

a, *b*. Ad. st.	Bolivia.	T. Bridges, Esq. [P.]. (Types of species.)

8. Nothoprocta branickii.

Nothoprocta branickii, *Tacz. P. Z. S.* 1874, p. 563 (Junin, C. Peru); *Sclat. & Salv. P. Z. S.* 1874, p. 680; *Tacz. Orn. Pér.* iii. p. 308, *Tables*, p. 107 (1886).

Adult. Smaller than *N. ornata* and about the size of *N. perdicaria*. Upper parts brownish grey, vermiculated with black, the feathers of the back with large subapical black spots; top of head black, spotted with fulvous whitish, the feathers with irregular rufous bars; sides of head and throat whitish, changing into rufescent on the lower neck, the feathers speckled or tipped with black, the black specks less numerous on the throat; breast silvery grey, on the sides greyish brown, vermiculated with black; lower part of breast, abdomen, and flanks rufous buff, undulated with grey bars, especially on the lower breast; under tail-coverts buff, undulated with dusky lines; quills brown-black; primaries with whitish rufescent bars or marks on the outer web; secondaries with black and rufous bars; under wing-coverts rufescent, with irregular dusky bars, the last row uniform greyish brown: "bill brown, the base of the lower mandible pale; feet yellowish; iris brown" (*Jelski*). Total length about 11 inches, wing 7, culmen 0·95, tarsus 1·4.

I have described a specimen belonging to the Branicki Museum, probably the type, kindly sent to me for inspection by Dr. Stolzmann.

Hab. Junin, Peru.

6. NOTHURA.

	Type.
Tinamus, *Spix* (*nec Lath.*), *Av. Bras.* ii. p. 63 (1825)..	N. boraquira.
Nothura, *Wagl. Syst. Av.* [p. 297] (1827)	N. boraquira.
Nothurus, part., *Sw. Class. B.* ii. p. 345 (1837).	
Nothera, *G. R. Gr. List Gen. Birds*, p. 63 (1840) (=Nothura).	

Range. Eastern South America from S. Brazil and Bolivia to Patagonia.

Key to the Species.

a. Pale rufous or fulvous below; wing more than 4·5 inches.
  a'. Vermiculations and spottings of upper parts much coarser.
    a''. Lower parts rufescent, dark spots of the breast not deep black, but rather brown and not regularly round..... *maculosa*, p. 559.
  b''. Lower parts not distinctly rufescent, but pale fulvous or yellowish.
    a'''. Spots on the breast deep black and almost regularly round ..... *nigroguttata*, p. 560.
    b'''. Spots on the breast not deep black, neither regularly round.
      a^1. Mesial part of the feathers of the back chestnut and black..... *boliviana*, p. 561.

c''. Lower parts very pale whitish buff; upper breast pale reddish vinous, the feathers with whitish edges and usually with one brown spot in the middle ..... *marmorata*, p. 561.

b'. Vermiculations and spottings of upper parts much finer; feathers of the breast with whitish edges.

d''. Breast paler, less extensively spotted, the feathers not distinctly barred ..... *boraquira*, p. 561.

e''. Breast darker, more broadly spotted, and with the feathers, especially the lower ones, distinctly barred in the hidden portion ..... *darwini*, p. 562.

b. Deep rufous; back chestnut, vermiculated with black; wing 4·5 inches .... *media*, p. 563.

1. Nothura maculosa.

Inambui, *Azara, Apunt.* iii. p. 40, n. 327 (Paraguay) (1805).

Tinamus maculosus, *Temm. Pig. et Gallin.* iii. pp. 557, 748 (1815) ? *Wied, Reis. nach Bras.* i. p. 116 (1820) (= medius, *Spix* ?); *Temm. Pl. Col., genre* Tinamou, sp. 2 (1826) (= major, *Spix*); ? *Wied, Beitr.* iv. p. 519 (1832) (= medius, *Spix* ?); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 237 (1838); *Nathus. J. f. O.* 1879, p. 358 (egg), 1882, p. 283.

Cryptura fasciata, *Vieill. N. D.* xxxiv. p. 109 (1819) (*ex Azara*).

Tinamus fasciatus, *Vieill. Enc. Méth.* i. p. 370 (1820).

Crypturus maculosus, *Licht. Verz. Doubl.* p. 68, n. 706 (San Paulo) (1823); *Thienem. Fortpflanz.* p. 26, t. v. f. 11 (egg) (1845).

Tinamus major, *Spix* (*nec auct.*), *Av. Bras.* ii. p. 64, t. 80 (Minas Geraes) (1825).

Nothura major, *Wagl. Syst. Av., gen.* Nothura, sp. 2 (1827); *id. Isis*, 1829, p. 747; *Less. Tr. d'Orn.* p. 513, n. 2 (1831); *Darwin, Zool. Voy.* '*Beagle*,' iii. p. 119 (1841); *G. R. Gr. Gen. B.* iii. p. 525, n. 2 (1844), Append. p. 25 (1849); *Reichb. Syn. Av.*, Gallinaceæ, t. 286. f. 1575 (1848) (*ex Spix*); ? *Bp. Compt. Rend.* xlii. p. 881, n. 338 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 340 (1856); *Pelz. Orn. Bras.* p. 295 (Ypanema, Cimeterio, Poderaciras, Ytararé, Jaguaraiba), pp. 454, lvi (1871); *Alix, Journ. de Zool.* iii. pp. 167, 252, pls. viii.-xi. (skeleton and muscles) (1874).

Nothura medius, part., *Wagl. Syst. Av., gen.* Nothura, sp. 2 (1827); *Less. Tr. d'Orn.* p. 513, n. 3 (1831).

Tinamus maculatus, *Less. Man. d'Orn.* ii. p. 204 (1828); *Natter. fide Thienem. Fortpflanz.* p. 26 (Anm.) (1845).

Nothurus maculosus, *Sw. Class. B.* ii. p. 345 (1837).

Nothura maculosa, *G. R. Gr. Gen. B.* iii. p. 525, n. 3 (syn. emend.) (1844); *id. List B. Brit. Mus.* iii. p. 53 (syn. emend.) (1844); *Hartl. Ind. Azar. Apunt.* p. 21, n. 327 (syn. emend.) (1847); *Licht. Nom. Av.* p. 87 (Minas) (1854); *Burm. Syst. Ueb. Th. Bras.* iii. p. 336 (part.) (1856); *id. J. f. O.* 1866, p. 259 (La Plata); *id. La Plata-Reise*, ii. p. 499 (part.) (1861); *G. R. Gr. List Gallinæ Br. Mus.* p. 104 (1867); *Sclat. & Salv. P. Z. S.* 1868, p. 143 (Buenos Ayres); *Sternberg, J. f. O.* 1869, p. 274 (Buenos Ayres); *Holtz, J. f. O.* 1870, p. 19 (eggs); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 51 (Minas Geraes); *G. R. Gr. Hand-list*, iii. p. 5, n. 9902 (1871); ? *Leybold, Exc. Pamp. Arjent.* p. — (1873); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 1 (Brazil, Paraguay, and Argentine) (1873); *Hudson, P. Z. S.* 1874, pp. 167, 170;

Garrod, P. Z. S. 1875, p. 343 (plantar tendons); ? *Leybold* (*v. Mart. transl.*), *J. f. O.* 1875, p. 443; *Durnf. Ibis*, 1876, p. 165, 1877, p. 203 (Buenos Ayres); *Gibson, Ibis*, 1880, p. 168 (Buenos Ayres); *Schleg. Mus. P.-B.*, Tinami, p. 42 (part., specim. 1, 2, 3, 6) (1880); *Dalgleish, Pr. R. Phys. Soc. Edinb.* vi. p. 249 (1882); *White, P. Z. S.* 1882, p. 629 (Missiones); *Rchnw. J. f. O.* 1882, p. 11 (Zool. Gart.); *Sclat. List Vert. An.* 8th ed. p. 547 (1883) (Zool. Gard.); *Barrows, Auk*, 1884, p. 317 (part.; Entrerios, Lower Uruguay); *Helm, J. f. O.* 1885, p. 347 (muscles); *Gibson, Ibis*, 1888, p. 282 (Paysandu, Uruguay); *Berl. J. f. O.* 1887, p. 37 (Pilcomayo, Rio Grande do Sul), p. 127; *Lucas, Pr. U.S. Nat. Mus.* 1887, pp. 157–158 (osteology); *Withington, Ibis*, 1888, p. 473 (Lomas de Zamora); *Sclat. & Huds. Argent. Orn.* ii. p. 211 (1889); *Bedd. Ibis*, 1890, pp. 62, 63 (with cut of cæca); *Sclat. t. c.* p. 82 (quintocubital), p. 425; *Heine u. Rchnw. Nom. Mus. Hein. Orn.* p. 304 (Chili and Montevideo) (1890); *Holland, Ibis*, 1892, p. 214 (Argentine); *Aplin, Ibis*, 1894, p. 214 (Uruguay); *Sclat. Ibis*, 1894, p. 453.

Tinamus maculosa, *Gieb. Thes. Orn.* iii. p. 636 (syn. emend.) (1877).

Adult. Above pale yellowish brown, barred with black and brown and streaked with fulvous white: these streaks run on both sides of the feathers of the back between the central dark portion and the greyish lateral edges; head and neck pale fulvous, with the feathers striped with black along the middle: upper part of the head mostly brown; throat immaculate white; lower parts fulvous, breast spotted with brown, sides with brown bars; flanks with brown bars, more or less crescentic; primaries brown, with regular pale fulvous marks on the outer web, and with regular brighter fulvous bars on the inner web; secondaries regularly barred with pale brown and fulvous; axillaries and under wing-coverts uniform fulvous, only the marginal ones of the latter with dusky spots: "bill and feet yellowish brown" (*Sclater*). Total length from 10 to 11 inches, wing 5·5, culmen 0·7, tarsus 1·4.

Female. Similar, but larger.

Young in down. "Head and neck still in down, dark brown lined with pale buff; a line starting at base of beak and forking into two; neck with the buff lines broader than the dark brown ones; body mottled buff and dark brown, with some little narrow white marks" (*Aplin*).

Hab. Argentine, Paraguay, Uruguay, and Southern Brazil.

a. Ad. st.	South America.	Dr. J. E. Gray [P.].
b. ♀ ad. sk.	Ypanema, S. Brazil, Sept. (*Natterer*).	Salvin-Godman Coll.
c, d. ♂ ♀ ad. sk.	Uruguay, July, Aug.	Alan Peel, Esq. [P.].
e. Ad. st.	Maldonado, Jan. (*C. Darwin*).	Zool. Soc. Coll.
f. Ad. sk.	Monte Video (*Johnston*).	Salvin-Godman Coll.
g. ♀ ad. sk.	Buenos Ayres, Feb. (*Withington*).	Sclater Coll.

2. Nothura nigroguttata.

Similar to *N. maculosa*, but blacker above, the black marks of the back being more conspicuous; lower parts paler, yellowish rather

than rufescent; the spots on the lower fore neck and upper breast of a darker black, more roundish, and better defined; also the black bars on the sides better defined: "iris and feet yellow" (*Siemiradzki*). Total length 8·5–10 inches, wing 5·5–6·25, culmen 0·7–0·8, tarsus 1·3–1·52.

Female. Larger than the male.

Hab. Central Pampas, Argentine Republic.

The types (male and female) of this apparently new species have been collected by Dr. Joseph Siemiradzki and belong to the Branicki Museum of Warsaw; they have been sent to me for inspection by Dr. Stolzmann.

3. Nothura boliviana.

Nothura media, *G. R. Gr.* (*nec Spix*), *List Gallinæ B. M.* p. 104 (Bolivia) (1867); *id. Hand-list*, iii. p. 5, n. 9904 (part., Bolivia) (1871).

Similar to *N. maculosa*, but paler below and much smaller. Total length 8–8·5 inches, wing 5–5·5, culmen 0·62–0·67, tarsus 1·02–1·1.

Hab. Bolivia.

Specimen *d* from Cinti, mentioned below, differs from the others in being paler, especially on the neck and lower parts.

a, *b*, *c*. Ad. st.	Bolivia.	T. Bridges, Esq. [C.]. (Types of species.)
d. Ad. sk.	Cinti, Bolivia.	Salvin-Godman Coll.

4. Nothura marmorata. (Plate XVIII.)

Nothura marmorata, *G. R. Gr. List Gallinæ B. M.* p. 104 (Bolivia) (1867); *id. Hand-list*, iii. p. 5, n. 9903 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 2 (1873); *iid. P. Z. S.* 1879, p. 642; *Schleg. Mus. P.-B.*, Tinami, p. 44 (Bolivia) (1880); *Blas. J. f. O.* 1885, p. 405.

Tinamus marmoratus, *Gieb. Thes. Orn.* iii. p. 636 (1877).

? Nothura maculosa, *v. Boeck* (*nec Temm.*), *MT. orn. Ver. Wien*, 1884, p. 165 (Cochabamba, Bolivia) (? = marmorata); *Blas. ibid.*; *id. J. f. O.* 1885, p. 405.

Similar to *N. maculosa*, especially on the back; the lower parts much whiter, the brown spots almost confined to the neck; upper breast pale reddish vinous, the feathers with whitish edges and usually with one brown spot in the middle; flanks with narrow brown undulated bands; axillaries fulvous, with brown-grey bands. Total length 9–10 inches, wing 5·6–6, culmen 0·72–0·75, tarsus 1·4–1·46.

Hab. Bolivia.

a, *b*. Ad. st.	Bolivia.	T. Bridges, Esq. [C.]. (Types of species.)

5. Nothura boraquira.

Tinamus boraquira, *Spix, Aves Bras.* ii. p. 63, t. 79 (1825); *Temm. Pl. Col., genre* Tinamou, sp. 4 & footnote (1826); *Less. Man.* ii. p. 205 (1828); *Gieb. Thes. Orn.* iii. p. 635 (1877).

Nothura boraquira, *Wagl. Syst. Av., gen.* Nothura, sp. 1 (1827); *Less. Tr. d'Orn.* p. 513, n. 1 (1831); *G. R. Gr. Gen. B.* iii. p. 525, n. 1 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 286. f. 1574 (1848) (*ex Spix*); *Bp. Compt. Rend.* xlii. p. 881, n. 337 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 338 (1856); *Burm. Th. Bras.* iii. p. 329 (1856); *G. R. Gr. List Gallinæ B. M.* p. 105, n. 6 (1867); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 51; *Pelz. Orn. Bras.* p. 295 (note), pp. 454, lvi (1871); *G. R. Gr. Hand-list*, iii. p. 6, n. 9908 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153, n. 3 (Brazil, Paraguay, and Argentine) (1873); *id. Ibis*, 1878, p. 405 (note); *Schleg. Mus. P.-B.*, Tinami, p. 44 (1880); *Sclat. P. Z. S.* 1883, p. 74; *Berl. J. f. O.* 1887, p. 127 (*ex Sclater & Salvin*).

Crypturus boraquira, *Thienem. Fortpflanz.* p. 26, t. v. f. 10 (egg) (1845).

Nothura maculosa, *Burm.* (*nec Temm.*) *J. f. O.* 1858, p. 161 (Mendoza).

Similar to *N. maculosa*, but differs in being smaller, in having the fulvous colour of the lower parts paler, the upper parts greyer and with finer vermiculations, the black parts of the feathers of the back less prominent; also the brown spots on the breast are paler, and the feathers of the breast have whiter edges: bill dusky above, pale below; feet yellowish. Total length about 10 inches, wing 5·5, culmen 0·8, tarsus 1·25.

Female. Scarcely larger.

Young. Similar to the adult, but the spots on the breast darker.

Hab. Brazil and Western Argentina near Mendoza.

a. ♀ ad. sk.	Mendoza, Argent. Rep., Feb. (*Weisshaupt*).	Salvin-Godman Coll.
b, c, d. ♂ ♀ ad. et juv. sk.	Vicinity of Mendoza (*Leybold*).	Salvin-Godman Coll.

6. **Nothura darwini.** (Plate XIX.)

Nothura minor, *Darw.* (*nec Spix*) *Zool. Voy.* '*Beagle*,' iii. p. 119 (Bahia Blanca) (1841); *Gould, Voy. of* '*Beagle*,' *Birds*, p. 119 (1841).

Nothura darwini, *G. R. Gr. List Gallinæ B. M.* p. 104 (Bahia Blanca) (1867); *id. Hand-list*, iii. p. 5, no. 9905 (1871); *Sclat. P. Z. S.* 1872, p. 547 (note, Rio Negro); *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 245 (1888); *Sclat. & Huds. Argent. Orn.* ii. p. 213, pl. 20 (1889).

Perdiz chicho, *Hudson, P. Z. S.* 1872, p. 547 (Rio Negro, Patagonia).

Tinamus darwini, *Gieb. Thes. Orn.* iii. p. 636 (excl. syn.) (1877).

? Nothura maculosa, *Sclat. & Hudson, P. Z. S.* 1872, p. 547 (Rio Negro); *Salvin, Ibis*, 1873, p. 131, note; *Durnf. Ibis*, 1877, p. 45 (Chuput, Patagonia); *Schleg. Mus. P.-B.*, Tinami, p. 44, specim. 4, 5 (Patagonia) (1883); *Barrows, Auk*, 1884, p. 318 (Bahia Blanca); *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 245 (N. Patagonia) (1888); *Frenzel, J. f. O.* 1891, p. 124 (Cordoba).

? Nothura perdicaria, *Durnf.* (*nec Kittl.*) *Ibis*, 1878, p. 405; *Burm. Anal. Mus. Nac. Buen. Aires*, iii. p. 245 (1888).

Similar to *N. boraquira*, but of a browner tinge above, and the

breast more greyish, the greyish mesial portion of the feathers being broader and the brown bars better defined.

Hab. Patagonia, and apparently also the Argentine Republic, near Cordova.

Specimens from Cordova require comparison.

a. Ad. sk.	Bahia Blanca (*C. Darwin*).	Zool. Soc. (Type of species.)
b, *c*. ♂ ♀ ad. sk.	Rio Negro, Patagonia, April, July (*W. H. Hudson*).	Salvin-Godman Coll.
d, *e*. ♀ ad. sk.	Rio Negro, April, Oct.	W. H. Hudson, Esq. [C.].
f. ♂ ad. sk.	Cosquin, Cordova, Argent. Rep., June (*E. A. White*).	Salvin-Godman Coll.

7. Nothura media.

Tinamus medius, *Spix*, *Av. Bras.* ii. p. 65, t. 81 (fig. mala ♀?; Tejuco) (1825); *Temm. Pl. Col.*, *genre* Tinamou, sp. 3 and footnote (1826); *Less. Man. d'Orn.* ii. p. 205 (1828); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 237 (1838).

Tinamus minor, *Spix*, *Av. Bras.* ii. p. 65, t. 82 (fig. mala ♂?; Tejuco, Minas Geraes) (1825); *Temm. Pl. Col.*, *genre* Tinamou, sp. 5 (part.) (1826).

Tinamus brevipes, *Natter. Mus. Vindob.*, fide *Temm. Pl. Col.*, *genre* Tinamou, footnote (1826); cf. *Pelz. Orn. Bras.* p. 295 (1871).

Nothura medius, part., *Wagl. Syst. Av.*, *gen.* Nothura, sp. 3 (1827); *Less. Tr. d'Orn.* p. 513, n. 3 (part.) (1831).

Nothura minor, *Wagl. Syst. Av.*, *gen.* Nothura, sp. 4 (1827); *id. Isis*, 1829, p. 747 (not=N. nana, ♀); *Less. Tr. d'Orn.* p. 513, n. 4 (1831); *G. R. Gr. Gen. B.* iii. p. 525, n. 4 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 286. f. 1577 (1848) (*ex Spix*); *Bp. Compt. Rend.* xlii. p. 881, n. 340 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 342 (1856); *Burm. Th. Bras.* iii. p. 331, n. 3 (1856); *G. R. Gr. List Gallinæ B. M.* p. 105, n. 7 (1867); *id. Hand-list*, iii. p. 6, n. 9907 (1871); *Schleg. Mus. P.-B.*, Tinami, p. 45 (1880).

Nothura media, *Wagl. Isis*, 1829, p. 747; *Pelz. Orn. Bras.* p. 295 (Fazenda do Rio Verde, Ytararè, Irisanga), pp. 454, lvi (1871); *G. R. Gr. Hand-list*, iii. p. 5, n. 9904 (Brazil) (1871); *Selat. & Salv. Nom. Av. Neotrop.* p. 153, n. 4 (Brazil) (1873); *Schleg. Mus. P.-B.*, Tinami, p. 45 (1880); *Grant*, *Ibis*, 1889, p. 449*; *Allen*, *Bull. Amer. Mus. N. H.* p. 152 (Matto Grosso) (1893).

Nothurus minor, part., *Sw. Class. B.* ii. p. 345 (1837).

Tinamus plumbeus (?), *Mus. Paris*, fide *Less. Compl. de Buff.* 2nd ed., *Ois.* p. 237 (note) (1838).

Nothura maculosa, part., *G. R. Gr. Gen. B.* iii. p. 525, n. 3 (1844); *Hartl. Erst. Nachtr. Verz. Ges. Mus.* p. 17, n. 191 (1846); *Rchnb.* (*nec Temm.*) *Syn. Av.*, Gallinaceæ, t. 286. f. 1576 (1848) (*ex Spix*); *Bp.* (*nec Temm.*) *Compt. Rend.* xlii. p. 881, n. 339 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 341 (1856); *Burm. Th. Bras.* iii. p. 330 (part.) (1856); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 52 (Curvelo).

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* Mr. Ogilvie Grant says that *Turnix variegatus*, Vieill. (N. D. xxxv. p. 47; Enc. Méth. i. p. 330, pl. 232. f. 4), is probably a Tinamou (*Nothura media*), but I cannot find that either the description or the plate agrees with the latter bird.

? Crypturus minor, *Thienem. Fortpflanz.* p. 26, t. v. f. 12 (egg) (1845).
Nothura assimilis, *G. R. Gr. List Gallinæ B. M.* p. 105 (1867); *id. Hand-list*, iii. p. 6, n. 9906 (1871).
Tinamus assimilis, *Gieb. Thes. Orn.* iii. p. 635 (1877).
? Nothura nana, *Hartert (nec Temm.), Kat. Vogelsamml.* p. 206, n. 3101 (1891) (=minor, *Spix*).

Adult. Differs from all the other species in its smaller size and decidedly rufous colour. Sides of the forehead and head, neck, breast, and abdomen rufous, brighter on the abdomen and thighs; crown and back chestnut, vermiculated with black, the feathers of the back greyish on the edges, and with two buff lateral stripes, more or less distinct; sides of the head and neck with brown stripes or marks; throat whitish; breast with brown marks, broader on the sides, where the feathers are mesially chestnut; flanks barred with brown; upper tail-coverts and tail greyish buff, undulated with brown; upper wing-coverts rufous with brown bars; primaries marked with brown and rufous on the outer web, brown barred with rufous on the inner one; secondaries barred with rufous-cinnamon and brown; under wing-coverts rufescent, the last row greyish, more or less barred with rufous. Total length about 7·5 inches, wing 4·5, culmen 0·75, tarsus 1·2.

Female. Similar, only somewhat larger. Total length about 8 inches, tarsus 1·25.

Although Spix's plates 81 and 82 scarcely agree with the types of *N. assimilis*, Gr., still they seem referable to the present bird.

Hab. S. Brazil.

a. Ad st.	S. America.	Zool. Soc. (Type of *N. assimilis*.)
b. Ad. sk.	No locality (*Eyton Coll.*).	Salvin-Godman Coll.
c. ♀ ad. sk.	Ytararè, Brazil, Febr. (*Natterer*).	Salvin-Godman Coll.
d. ♂ ad. sk.	Chapada, Matto Grosso, May (*H. H. Smith*).	Salvin-Godman Coll.

7. TAONISCUS.

Type.
Taoniscus, *Glog. Hand- u. Hilfsb. d. Naturg.* p. 404 (1842). T. nanus.
Pavuncula, *Bp. Compt. Rend.* xlii. p. 881, gen. no. 100 (1856). T. nanus.

Range. Paraguay and S. Brazil.

1. Taoniscus nanus.

Inambú-carapé, *Azara, Apunt.* iii. p. 45, n. 328 (1805) (Paraguay).
Tinamus nanus, *Temm. Pig. et Gallin.* iii. pp. 600, 733 (1815) (Paraguay, *ex Azara*); *Vieill. Enc. Méth.* i. p. 371 (1823); *Temm. Pl. Col.* 316 (San Paulo) (1824); *id. Pl. Col., genre* Tinamou, sp. 5 (1826); *Less. Man.* ii. p. 205 (1828); *id. Compl. de Buff.* 2nd ed. *Ois.* p. 237 (1838); *Temm. Pl. Col.* i., *Tabl. Méth.* p. 87 (1838); *Gieb. Thes. Orn.* iii. p. 637 (1877).
Cryptura nana, *Vieill. N. D.* xxxiv. p. 102 (1819) (*ex Azara*).

Tinamus minor, part., *Temm. Pl. Col., genre* Tinamou, sp. 5 (= nanus ♀) (1826).

Nothura nana, *Wagl. Syst. Av., gen.* Nothura, sp. 5 (1827); *id. Isis*, 1829, p. 747; *Less. Tr. d'Orn.* p. 513, n. 5 (1831); *G. R. Gr. Gen. B.* iii. p. 525, n. 5 (1844); *Hartl. Ind. Azara Apunt.* p. 21, n. 328 (1847); *Rchnb. Syn. Av.*, Gallinaceæ, t. 286. f. 1588 (1848) (*ex Temminck*); *Licht. Nom. Av.* p. 87 (1854); *Burm. Th. Bras.* iii. p. 331 (1856); *id. J. f. O.* 1858, p. 161; *G. R. Gr. List Gallinæ B. M.* p. 105, n. 8 (1867); *Pelz. Orn. Bras.* p. 295 (Fazenda do S. Coronel Corneiro, Jaguaraiba, Ytararè, Irisanga), pp. 454, lvi (1871); *Schleg. Mus. P.-B.*, Tinami, p. 46 (note) (1880); ? *Schäff. J. f. O.* 1888, p. 6.

Nothurus minor (part.), *Sw. Class. B.* ii. p. 345 (1837).

Taoniscus pavoninus, *Glog. Hand- u. Hilfsb. d. Nat.* p. 404 (1842).

Pavuncula nana, *Bp. Compt. Rend.* xlii. p. 881, n. 341 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 343 (1856).

Tinamus carapè, *Natt. Cat. MS.*, teste *Pelz. Orn. Bras.* p. 295 (1871).

Nothura (Taoniscus) nana, *G. R. Gr. Hand-list*, iii. p. 6, n. 9909 (1871).

Taoniscus nanus, *Sclat. & Salv. Nom. Av. Neotrop.* p. 153 (1873); *Berl. J. f. O.* 1887, p. 127, n. 356.

Adult male. Upper part of the head greyish brown, with the centres of the feathers blackish; throat whitish; upper parts blackish, with narrow whitish bars, the edges of the feathers greyish; neck and breast dull whitish, with a few dusky stripes or spots; lower breast and abdomen whitish, the flanks with regular brown-blackish bars; upper tail-coverts very long, marked like the back; upper wing-coverts greyish, with dusky and whitish margins; primaries uniform brown: bill dusky above, pale below: feet yellow-orange. Total length about 6 inches, wing 3·2, culmen 0·6, tarsus 0·62. (*Mus. Paris.*)

Female. Upper parts rufous brown, the feathers broadly blackish in the middle and vermiculated with brown; upper tail-coverts like the feathers of the back, but much shorter than in the male; sides of the head whitish buff with dusky lines; throat, middle of the lower breast, and abdomen whitish; on the sides of the neck and on lower fore neck the feathers edged with brown; sides of the breast and flanks barred with brown, the bars broader on the flanks; upper wing-coverts barred with brown and whitish buff; primaries uniform brown; under wing-coverts whitish with brown lines, the last row uniform grey: bill brown above, pale at the base of the lower mandible; feet in dry skin yellow. Total length about 6 inches, wing 3, culmen 0·5, tarsus 0·6.

Hab. Paraguay and Brazil (Minas Geraës).

a. ♀ ad. sk. Ytararè, Brazil, March (*Natterer*). Salvin-Godman Coll.

Subfamily II. TINAMOTIDINÆ.

8. CALOPEZUS.

Type.

Eudromia, *Is. Geoffr., Mag. de Zool.* 1832, Cl. ii. text to pl. 1 (1832) (*nec* Eudromias, *Boie*) ..... C. elegans.

Calodromas, *Sclat. & Salv. Nom. Av. Neotrop.* pp. 153, 156 (1873) (*nec* Calodromus, *Guérin*, 1832)..... C. elegans.

Calopezus, *Ridgw. Pr. Biol. Soc. Wash.* ii. p. 97 (1884) (= Calodromas).

Range. Argentine Republic and Lower Uruguay.

1. Calopezus elegans.

Perdix martineta, *Azara, Apunt.* iii. p. 31 (1805); *Bedd. Ibis,* 1890, p. 61.

Eudromia elegans, *D'Orb. & Is. Geoffr. Mag. de Zool.* 1832, Cl. ii. text to pl. 1 (Patagonia) (1832); *Lafr. Rer. Zool.* viii. p. 87; *D'Orb. Voy.* ii. p. 68 (note 1), p. 302, n. 11 (1835–38); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 241, pl. —. f. 1 (1838); *Fraser, P. Z. S.* 1843, p. 116; *Bridges, ibid.* (Mendoza); *Hartl. Ind. Azar. Apunt.* p. 21 (Anm.) (1847); *Bp. Compt. Rend.* xlii. p. 881, n. 342 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 344 (1856); *Burm. J.f. O.* 1858, p. 161, 1860, p. 259; *id. La Plata-Reise,* ii. p. 498 (San Luis, Mendoza) (1860); *G. R. Gr. Hand-list,* iii. p. 6, n. 9910 (1871); *Huds. & Sclat. P. Z. S.* 1872, pp. 545, 549 (Rio Negro); *Leyb. Exc. Pamp. Arjent.* p. — (1873); *id.* (*v. Mart. transl.*) *J.f. O.* 1875, p. 443; *Schleg. Mus. P.-B.,* Tinami, p. 48 (Chili!) (1880); *Burm. Anal. Mus. Nac. Buen. Aires,* iii. p. 245 (Patagonia) (1888), p. 318 (1890).

Tinamotis elegans, *G. R. Gr. Gen. B.* iii. p. 525, n. 2 (1844); *Bridges, P. Z. S.* 1847, p. 28 (Mendoza); *Rchnb. Syn. Av.,* Gallinaceæ, t. 287. f. 1583 (1848) (*ex D'Orb. et Is. Geoffr.*); *G. R. Gr. List Gallinæ B. M.* p. 106 (Chili!, *Bridges*) (1867); *Gieb. Thes. Orn.* iii. p. 635 (1877).

Tinamus (Eudromia) elegans, *Schleg. Handl. Dierk.* i. p. 399 (1857).

Tinamus elegans, *Schleg. Dierent.* p. 233 (1864).

Calodromas elegans, *Sclat. & Salv. Nom. Av. Neotrop.* p. 153 (Argentine) (1873); *Sorby, P. Z. S.* 1875, p. 361 (egg); *Durnf. Ibis,* 1877, p. 45 (Chuput), 1878, p. 406 (Centr. Patag.); *Sclat. P. Z. S.* 1879, p. 311 (eggs, Falklands!); *id. Zool. Voy. Chall., Birds,* p. 152 (eggs) (1881); *Barrows, Auk,* 1884, p. 318 (Bahia Blanca, Lower Uruguay); *Sclat. & Huds. Argent. Orn.* ii. p. 214 (1889); *Bedd. Ibis,* 1890, pp. 61–66, ff. 2, 3 (cæca); *Sclat. Ibis,* 1890, p. 82 (quintocubital), p. 265; *Frenzel, J.f. O.* 1891, p. 124 (Cordoba); *Sclat. Bull. Br. Orn. Club,* no. v. p. xxix; *id. Ibis,* 1893, p. 256; *Aplin, Ibis,* 1894, p. 213 (not on the Uruguay); *Sclat. Ibis,* 1894, p. 453.

Calopezus elegans, *Ridgw. Pr. Biol. Soc. Wash.* ii. p. 97 (1884).

Adult male. Above densely banded and spotted with black and

pale fulvous; the fulvous spots roundish and very conspicuous: head greyish, each feather with a mesial black streak; a long recurved vertical crest of black feathers, partly edged with cinereous; two whitish bands start from above the eyes and run along the sides of the nape; another whitish band starts from the base of the upper mandible and crosses the cheeks under the eyes; throat whitish; neck greyish, each feather with a mesial blackish stripe; the feathers of the lower neck with a mesial black stripe, two pale lateral stripes, and numerous black cross bars; remainder of the lower parts buffish white, with numerous black bars, more or less crescentic, the abdomen almost uniform; primaries greyish black, on the outer web regularly spotted, on the inner web regularly barred with buffish white; secondaries barred on both webs; under wing-coverts variegated with greyish brown and whitish, the last row pale grey with whitish bars, irregularly crescentic; tail barred across with blackish and buffish white: "bill blackish; feet bluish grey" (*Sclater*); "iris dark" (*Hudson*). Total length about 14·5 inches, wing 8·5, tail 3·25, culmen 1·1, tarsus 1·9.

Female. Similar to the male.

Young in down. Upper parts greyish brown, thickly dotted with black at the tip of many downy feathers, while other feathers are striped with white; a conspicuous brownish crest; two white bands—one from above the eyes, down the sides of the neck, the other from the base of the upper mandible under the eyes; throat and abdomen white; lower fore neck and upper breast greyish, with some dusky spots and white stripes.

Hab. Southern part of S. America, from S. Uruguay to Argentina and Patagonia. Both Gray and Schlegel erroneously mention specimens from Chili! and Sclater mentions eggs collected in the Falklands!

a, b, c. Ad. et juv. st. & sk.	[Chili] Probably Mendoza *.	T. Bridges, Esq. [C.].
d. Ad. st.	Mendoza, Argent. Republic, March (*Burmeister*).	Salvin-Godman Coll.
e. ♀ ad. st.	Mendoza, Feb. (*Weisshaupt*).	Salvin-Godman Coll.
f–h. Pull. sk.	Vicinity of Mendoza (*Leybold*).	Salvin-Godman Coll.
i. ♀ ad. sk.	Rio Negro, Patagonia, Oct. (*W. H. Hudson*).	Salvin-Godman Coll.
k. Pull. sk.		Gould Coll.

9. TINAMOTIS.

	Type.
Tinamotis, *Vigors, P. Z. S.* 1836, p. 79	T. pentlandi.

Range. S. America from the Andes of Peru, and probably also of Ecuador, to N. Chili, Bolivia, and also Patagonia.

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* *Cf.* P. Z. S. 1847, p. 28.

Key to the Species *.

a. Quills brown, barred with rufescent on the outer web ..... *pentlandi*, p. 568.
b. Quills nearly uniform bright rufescent ..... *ingoufi*, p. 569.

1. Tinamotis pentlandi.

Eudromia andecola †, *D'Orb. Voy.* ii. p. 68 (note 2), p. 302, n. 12 (Bolivia) (1835-38).

Tinamotis pentlandi, *Vigors, P. Z. S.* 1836, p. 79 (Andes); *id. Lond. & Edinb. Philos. Mag.* x. p. 289 (1837); *id. Isis*, 1838, p. 195; *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 241 (1838); *G. R. Gr. List Gen. B.* p. 63 (1840); *id. op. cit.* 2nd ed. p. 82 (1841); *G. R. Gr. & Mitch. Gen. B.* iii. p. 525, pl. 137 (1844); *Tsch. Arch. f. Naturg.* 1844, i. p. 308, n. 283 (Peru); *id. Faun. Per., Aves*, pp. 47, 286 (1846); *Bridges, P. Z. S.* 1847, p. 28 (Tapaquilcha); *Rchnb. Syn. Av.*, Gallinaceæ, t. 287. f. 1588 (*ex Gr. & Mitch.*) (1848); *Bp. Compt. Rend.* xlii. p. 881, n. 343 (1856); *id. Tabl. Parall. Gallin.* (*Extract*), p. 12, n. 345 (1856); *G. R. Gr. List Gallinæ B. M.* p. 105 (1867); *Sclat. & Salv. P. Z. S.* 1867, p. 989 (Arequipa), 1868, p. 570; *G. R. Gr. Hand-list*, iii. p. 6, no. 9911 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 153 (Bolivia and Peru) (1873); *Tacz. P. Z. S.* 1874, p. 564 (Junin); *Gieb. Thes. Orn.* iii. p. 635 (1877); *Sclat. & Salv. P. Z. S.* 1879, p. 642; *v. Boeck, MT. orn. Ver. Wien*, 1884, p. 165 (Cochabamba, Bolivia); *Tacz. Orn. Pér.* iii. p. 310 (1886); *Sclat. P. Z. S.* 1886, p. 404 (Huasco, N. Chili), 1891, pp. 132, 137 (Sacaya and Canchosa); *James, New List Chil. B.* p. 14, n. 254 (1892).

Eudromia sp., *Bridges, P. Z. S.* 1846, p. 9 (Tapaquilcha).

Tinamus pentlandii, *Schleg. Handl. Dierk.* i. p. 399 (1857); *id. Dierent.* p. 233 (1864).

Eudromia pentlandii, *Schleg. Mus. P.-B.*, Tinami, p. 47 (1880).

Adult. Feathers of the head with buff and black stripes; a brown stripe from the nares through the eyes to the sides of the neck, another from the gape through the cheeks; throat and two bands along the sides of the nape whitish; a mesial band along the nape, mantle, and back bluish grey, the latter irregularly spotted with rufous; lower back, rump, and upper tail-coverts olive, with irregular yellowish spots; middle part of the fore neck buff with bluish-grey stripes; lower fore neck and breast bluish grey, barred with

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* The following species has been wrongly included among the Crypturi in the genus *Tinamotis*:—

TURNIX OCELLATA.

Ortygis ocellata, *Meyen, Nov. Act. Ac. Leop.* xvi., *Suppl.* i. p. 101, t. xvii. (Peru!) (1833); *id. Reise*, iii p. 225, t. xxvii.; *Esch. Arch. f. Naturg.* 1844, i. p. 307, n. 275.

Tinamotis ocellata (*Meyen*), *G. R. Gr. Gen. B.* iii. p. 525, n. 3 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 287. f. 1585 (*ex Meyen*); *G. R. Gr. List Gallinæ B. M.* p. 106 (1867); *id. Hand-list*, iii. p. 6, no. 9912 (1871); *Gieb. Thes. Orn.* iii. p. 635 (1877).

† Possibly this name has the priority.

rufescent; middle of the lower breast barred with whitish and greyish brown; abdomen, flanks, and under tail-coverts uniform rufous-cinnamon; upper wing-coverts bluish grey, with irregular bar-like rufescent marks; primaries uniform brown on the inner web, with pale rufescent marks on the outer web; secondaries greyish brown, the inner ones regularly barred with rufescent on both webs, the outer ones only on the outer web, while the inner web is irregularly freckled with rufescent; under wing-coverts buff, irregularly barred with brown, the last row uniform greyish; tail-feathers olive, barred with yellowish: bill brown; iris chocolate; legs whitish green; feet black. Total length about 18 inches, wing 10, tail 4·5, culmen 1·1, tarsus 1·9.

Female. Similar to the male.

Hab. Bolivia, N. Chili, Peru, and, according to Taczanowski, also Ecuador.

a. Ad. sk.	[Chili] more probably Tapachilqua, Bolivia.	T. Bridges, Esq. [C.].
b. Ad. sk.	Chili, or more probably Bolivia (*Pentland*).	Zool. Soc. (Type of species.)
c. ♀ ad. sk.	Huasco, Prov. of Tarapacá, Chili, Feb.	H. Berkeley James, Esq. [P.].
d, *e*. ♂ ♀ ad. sk.	Sacaya, Chili, April.	H. Berkeley James, Esq. [P.].
f. ♂ ad. sk.	Canchosa, Chili, Jan.	H. Berkeley James, Esq. [P.].
g. Ad. sk.	Arequipa, S.W. Peru, July (*H. Whitely*).	Salvin-Godman Coll.

2. Tinamotis ingoufi.

Tinamotis ingoufi, *Oust. Ann. Sc. Nat., Zool.* ix. p. 18 (1890); *id. Miss. Sc. Cap Horn, Ois.* pp. 105, 106, pl. 1 (Patagonia) (1891).

Female (type). Very different from *T. pentlandi*, and easily distinguishable by the quills being rufous-cinnamon, as in *Rhynchotus rufescens*: primaries uniform, secondaries with black markings; upper parts and breast grey, but each feather brown in the middle and with irregular Λ-shaped marks; head with white and dusky stripes; throat white, spotted with dusky; upper part of the head dusky, bounded on the sides by two whitish bands, which join on the occiput; four white bands along the neck, two on each side; a band on the hind neck and one between the white ones on the sides of the neck dusky; lower breast white, with irregular crescent-like dusky bands; lower abdomen and under tail-coverts rufescent: bill dusky olive; feet plumbeous; iris yellow. Total length about 15·5 inches, wing 8, tail 2·75, culmen 1, tarsus 1·25. (*Mus. Paris.*)

Hab. E. Patagonia, near Santa Cruz.

Subclass RATITÆ.

Struthiones, *Lath. Ind. Orn.* ii. p. 662, Ordo vi. (1790).
Ratitæ, *Merrem, Abhandl. Akad. Wissensch. Berlin*, 1812–13, *Physik. Kl.* p. 259.
Cursores, part., *Illig. Prodr.* p. 246 (1811).
Proceri (familia), *Illig. l. c.* p. 246 (1811).
Megistanes (familia), *Vieill. Analyse*, p. 53 (1816).
Brevipennes (familia), *Cuv. Règn. An.* i. p. 459 (1817).
Proceres, *Sundev. Meth. nat. Av. disp. Tent.* p. 151 (1872).
Struthioniformes, *Seebohm, Class. B.* p. 44 (1890).

All the preceding Orders of Birds being comprised in the Subclass *Carinatæ*, the *Ratitæ*—which form the second Subclass of living Birds—are characterized thus (see Gadow, Proc. Zool. Soc. 1892, p. 237):—

"Nidifugous. Omnivorous. Terrestrial.
"Rhamphotheca compound. Nares impervious. Holorhinal.
"Vertebræ heterocœlous.
"Basipterygoid processes functional. Proximal articulating head of quadrate single.
"Sternum without keel and without spina interna. Spina externa small or absent. Coracoid fused with scapula; both bones forming a very obtuse angle.
"With incisura ischiadica....
"Wings reduced; flightless. Terminal caudal vertebræ not coalesced into a pygostyle.
"Hypotarsus simple....
"Adult without pterylæ. Oil-gland absent.
"Cæca functional."

To these characters it must be added that the *Ratitæ*, like the Tinamous, have the upper mandible covered at the base with a membrane or cere, which also envelops the nasal grooves; besides, they are quintocubital and have the barbs of the feathers disconnected. Penis fully developed.

The *Ratitæ* have a wide distribution from Africa and Arabia, over many of the Islands of Malayasia and Polynesia, to Australia and South America.

Synopsis of the Orders.

a. Hallux absent; bill moderate, about the length of the head.
a'. Feathers without aftershaft.
a''. Only two toes ..... 1. **STRUTHIONES**, p. 571.
b''. Three toes ..... 2. **RHEÆ**, p. 577.

b'. Feathers with a large aftershaft ..... 3. **CASUARII**, p. 585.

b. Hallux present, and three toes anteriorly; bill very long, much longer than the head; the nostrils near the tip ..... 4. **APTERYGES**, p. 603.

Order I. STRUTHIONES.

Only two toes, the third and fourth, are present; terminal phalanges shortened, with stunted nails.

Maxillo-palatines articulating with the vomer, which touches neither palatines nor pterygoids.

Procoracoid large. No clavicles. Pubes united in a symphysis. Tibia without bony bridge.

Aftershaft absent. Quills and tail-feathers large.

Cæca and rectum enormous.

Ethiopian.

The members of this Order are the largest birds actually living. Their bill is broad and depressed, with the culmen flattened and the tip strong, rounded and overlapping that of the mandible; the nostrils placed in a broad membranous groove near the middle of the bill, and the opening oval; the wings are short, imperfect, and furnished with long soft plumes; the tail is moderate, and composed of curved pendent feathers; the tarsi are very long, robust, and in front near the toes covered with transverse scutes; the two toes are short and robust, the outer shorter and much padded; the claws short, broad and flattened.

Only one family.

Family STRUTHIONIDÆ.

1. STRUTHIO.

Type.

Struthio, *Linn. S. N.* i. p. 265, gen. 96 (1766)..... S. camelus.

Range. Confined to Africa and Arabia.

[*Cf.* NOLTE, "Strausse und Straussenzucht in Südafrika" (J. f. O. 1895, pp. 44–79).]

Key to the Species.

a. Feathers of the body black. (*Males.*)

a'. Naked parts reddish: a ring of white feathers on the lower part of the neck.. *camelus*, p. 572.

b'. Naked parts lead-grey or blue-grey; no distinct white ring of feathers on the lower part of the hind neck.

a''. Naked skin of head, neck, and legs bluish grey; on the crown a horny shield of a dirty yellowish, surrounded with downy hairs ..... *molybdophanes*, p. 574.

b''. Naked skin of head, neck, and legs lead-grey or even white-grey; no horny shield on the crown ..... *australis*, p. 575.

b. Feathers of the body greyish. (*Females*.)

1. Struthio camelus.

Struthio camelus, *Linn. S. N.* ed. 10, p. 155, n. 1 (1758: Syria, Arabia, Africa).

Struthio, *Briss. Orn.* v. p. 3, pl. i. f. 1 (1760).

Struthio camelus, *Linn. S. N.* i. p. 265, n. 1 (1766); *Scop. Ann.* i. *Hist. Nat.* n. 160 (1769); *Gerini, Orn.* ii. p. 29, tt. 137, 138, 139 (1776); *Gm. S. N.* i. 2, p. 726, n. 1 (1788); *Lath. Ind. Orn.* ii. p. 663, n. 1 (1790); *Bonn. Enc. Méth.* i. p. 1 (part.), pl. 4. f. 1 (1790); *Cuv. Ménag. du Mus. H. N.* i. p. 2 (1801); *Vieill. N. D.* iii. p. 85 (part.) (1816); *Cuv. Règn. An.* i. p. 461 (1817); *Steph. Gen. Zool.* xi. 2, p. 423 (part.), pl. 27 (1819); *Vieill. Gal. des Ois.* ii. p. 70 (part.), pl. 223 (1825); *Less. Man. d'Orn.* ii. p. 209 (part.) (1828); *Cuv. Règn. An.* 2nd ed. i. p. 495 (1829); *Less. Tr. d'Orn.* p. 4 (part.), pl. i. f. 1 (1831); *Benn. Gard. Men. Zool. Soc.* ii. p. 47, with fig. (1831); *Sw. Class. B.* ii. p. 345 (1837); *Rüpp. Neue Wirbelth.* p. 114 (1835–40); *Temm. Pl. Col.* i., *Tabl. Méth.* p. 88 (1838); *Gulliver, P. Z. S.* 1842, p. 71 (muscular fibres of heart), pp. 141, 195 (blood-corpuscles); *G. R. Gr. Gen. B.* iii. p. 527, pl. 188. f. 4 (head, bill, and foot) (1844); *id. List B. Brit. Mus.* iii. p. 54 (part.) (1844); *Rüpp. Syst. Uebers.* p. 109, n. 389 (Egypt, Nubia, Abyssinian coast, Sennaar, and Kordofan) (1845); *Rchnb. Syn. Av.*, Gallinaceæ, t. 389. ff. 2198–2205 (1848); *id. Av. Syst. Nat.* p. xxx (1852); *Licht. Nomencl. Av.* p. 88 (1854); *Hartl. J. f. O.* 1854, p. 212 (Senegambia, Guinea); *Gosse, Bull. Soc. Acclim.* 1856, pp. 290–295 (part.); *Aucapitaine, t. c.* pp. 379–385 (domestication); *Bp. Compt. Rend.* xliii. p. 841, n. 1 (1856); *Hartl. Orn. Westafr.* p. 206 (Senegambia, Guinea) (1857); *Hardy, Compt. Rend.* xlvi. p. 1272 (egg) (1858); *Heugl. Ibis*, 1859, p. 343 (part.; about 24° N. lat., Plains of Habab); *Homey. J. f. O.* 1859, p. 364 (Zool. Gard.); *Tristr. Ibis*, 1860, p. 72 (N. Africa); *Des Murs, Tr. d'Oologie*, p. 361 (1860); *Suquet, Rev. Zool.* 1861, pp. 467–482; *id. Bull. Soc. Acclim.* 1861, p. 142 (incubation); *Hartl. J. f. O.* 1861, p. 267 (Bissao); *Aucapitaine, Rev. et Mag. de Zool.* 1862, p. 414; *Sclat. Trans. Zool. Soc.* iv. p. 354, pl. 69 A. (male) (1862); *id. P. Z. S.* 1863, p. 233 (incubation); *Parker, t. c.* p. 511 (sacral vertebræ); *Tristr. P. Z. S.* 1864, p. 449 (Belka, S. Palestine); *Schley. De Dierent., Vogels*, p. 235, f. p. 236 (1864); *Wolf, Zool. Sketches*, 2nd ser. pl. — (young) (1865); *Haughton, Ann. & Mag. N. H.* (3) xv. pp. 262–272, pls. vi., vii. (muscles of the legs) (1865); *Macalister, Pr. R. Irish Acad.* ix. pp. 1–24 (1865); *Haughton, t. c.* pp. 50–61 (muscular mechanism of legs) (1865); *Huxley, P. Z. S.* 1867, p. 420, f. 1 (under view of the skull); *Tristr. Ibis*, 1868, p. 331 (Belka); *Desmoure, Bull. Soc.*

Acclim. (2) vii. p. 205 (breeding in Zool. Gard. at Florence) (1870); *Rivière, t. c.* p. 566 (in confinement) (1870); *Finsch u. Hartl. Vög. Ost-Afr.* pp. 597–607 (part.) (1870); *G. R. Gr. Hand-list*, iii. p. 1, n. 9841 (part.) (1871); *Garrod, P. Z. S.* 1872, pp. 356–363 (anatomy), 1873, p. 470 (both carotids), p. 644 (ambiens); *Elwes, P. Z. S.* 1873, p. 648 (Palestine); *Schleg. Mus. P.-B.*, Struthiones, p. 6 (part.) (1873); *Heugl. Orn. N.O.-Afr.* ii. 2, p. 925 (1873); *Harting & Moseuth. Ostriches & Ostr. Farm.* pp. 2–54 (part.) (1877); *Forbes, P. Z. S.* 1877, p. 307, pl. 315. f. 6 (bursa Fabricii); *Mivart, Tr. Zool. Soc.* x. p. 385 (1877); *Schmidt, P. Z. S.* 1880, p. 315; *Forbes, P. Z. S.* 1881, p. 779, ff. 1, 2 (trachea); *Nathus. J. f. O.* 1882, p. 136; *Sclat. List Vert. An.* 8th ed. p. 551 (1883); *Bolau, J. f. O.* 1884, p. 262; *Tristr. Faun. & Flor. of Palest.* p. 139 (1884); *Sutton, P. Z. S.* 1885, p. 587 (sella turcica); *Sundev. Ibis*, 1886, p. 425 (nail on the middle finger); *Hartert, J. f. O.* 1886, p. 613 (Niger); *Schal. J. f. O.* 1888, p. 118; *Heine u. Reichnw. Nom. Mus. Hein. Orn.* p. 305 (1890); *Evans, Ibis*, 1891, pp. 84, 85 (incubation); *Rendall, Ibis*, 1892, p. 230 (Gambia); *Sclat. P. Z. S.* 1892, p. 579 (Upper Niger); *Gadow, Bronn's Thier-Reichs*, vi. 4, p. 103 (1893); *Nolte, J. f. O.* 1895, pp. 46, 54; *Kuschel, ibid.* p. 81; *Nassorrow, Zool. Anz.* xviii. no. 480, pp. 277–280 (pterylosis of the embryo) (July 1895).

Autruche, *D'Aubent. Pl. Enl.* 457 (♀); *Buff. Hist. Nat. Ois.* i. p. 398, pl. 29 (1770).

Black Ostrich, *Brown, Illustr.* pp. 37, 38 (part.), pl. 16 (♂) (1776); *Lath. Syn.* iii. 1, p. 6, n. 1, pl. 71 (1785).

Strauss, *Hartm. J. f. O.* 1863, p. 318, 1864, p. 154 (Kordofan); *id. Reise in N.O.-Afr.* p. 506.

Adult male. Head, neck, and legs naked, the skin of a bright flesh-colour; on the crown a naked area pale brown; the head with stiff hoary whitish feathers; eyelashes dusky; down of the neck soft and silver-grey; the feathers at the base of the hind neck white; feathers of the body with the barbs disconnected, deep black, those of the back with a certain reddish lustre; quills and tail-feathers white: bill horn-yellow with the tip brown, the lower mandible reddish; iris brown; tarsus covered with flesh-coloured shields, surrounded with pale horn-yellow. Total length about 6 feet, height about 8 feet, bill from gape 5 inches, tarsus 16 inches.

Female. Smaller than the male, and the feathers of the body of a dirty grey, more or less yellowish; head, neck, and legs grey, with a yellowish tinge; downy feathers on the neck yellow-grey; quills dirty white; tail-feathers brown, edged with white or grey, some entirely white. Shields on the tarsi horn-colour, darker on the toes (*Nolte*).

Young. "Downy feathers of head and neck dirty fulvous whitish; on forehead and crown more reddish; a band from the nape to the interscapular region brown; on the crown and sides of the neck some dusky stripes; feathers of the body brown, with the tips broadly fulvous" (*Heuglin*).

Nestling. Covered with stiff and hairy down; crown bright rusty reddish, with black marks: neck dirty whitish fulvous; cheeks, ear-region, and chin purer white; on the hind neck three

distinct longitudinal blackish-brown bands; sides of the neck with brown stripes; breast fulvous white; abdomen dirty white; on the back, from the whitish fulvous ground spring some straw-yellow and black bristles, which have the apical half flattened, lanceolated, and of horny texture" (*Heuglin*).

Egg-shell smooth.

Hab. Northern Africa, south to the Niger on the west, to Abyssinia on the east; Arabia *, north to Southern Palestine.

a, *b*. Pull. sk.	Bogos-land.	Hr. Esler [C.].
c, *d*. ♂ ♀ skeletons.	Gambia.	Earl of Derby [P.].
e. ♂ skeleton.	Basin of the Upper Niger.	Zool. Soc. [Purch.].
f. Skull.		
g. Bones.		Earl of Derby [P.].

2. Struthio molybdophanes.

Struthio camelus, *Blyth, Journ. As. Soc. Beng.* xxiv. p. 305 (1855); *Heugl. Ibis*, 1859, pp. 343, 344 (part., Somali); *Nathus. Zeitschr. f. wiss. Zool.* 1868, p. 233, t. 13. ff. 3–6, t. 14. ff. 7, 8, 9, 11, t. 15. f. 13 (structure of the egg-shell); *Fischer u. Rchnw. J. f. O.* 1878, p. 247 (S. Galla-land); *Böhm, J. f. O.* 1882, p. 178 (Ugogo, Central Africa), 1885, p. 53 (Central Africa).

Struthio molybdophanes, *Rchnw. Sonntagsbl. Norddeutsch. Allgem. Zeit.* n. 37, 16th Sept. 1883; *id. Mitth. orn. Ver. Wien*, 1883, p. 203, with pl.; *Rchnw. u. Schal. J. f. O.* 1883, p. 399; *Rochebrune, Act. Soc. Linn. Bord.* viii. p. 435 (1884); *Salvad. Ibis*, 1884, p. 116 (in confinement); *Ed. ibid.*; *Finsch, t. c.* pp. 352, 353; *Gurn. t. c.* pp. 465, 466 (= australis?); *Rchnw. J. f. O.* 1884, pp. 238, 248; *Dallwitz, t. c.* pp. 245, 246 (egg); *Henke, Zeitschr. ges. Orn.* 1884, pp. 219–222, t. xii. f. anter. (egg); *id. Liebe Zeitschr.* 1884, p. 38; *Bodinus, J. f. O.* 1885, p. 12; *Dallwitz, t. c.* p. 102; *Fischer, t. c.* p. 114 (E. Africa); *Nathus. t. c.* pp. 165–176, t. ii. f. 2 (structure of egg-shell); *Rchnw. t. c.* p. 404; *Rchnw. u. Schal. t. c.* p. 452; *Sclat. P. Z. S.* 1886, p. 320 (in confinement); *Rchnw. J. f. O.* 1887, p. 45 (Kitende Steppe, E. Africa); *Schal. J. f. O.* 1888, p. 118; *Sclat. P. Z. S.* 1891, p. 465 (in confinement), 1892, p. 580, 1893, p. 613, 1894, pp. 456, 654 (Zool. Gard.); *Gadow, Bronn's Thier-Reichs*, vi. 4, p. 103 (1893); *Schal. J. f. O.* 1894, p. 7; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xliv. p. 548 (1894); *Nolte, J. f. O.* 1895, pp. 47, 55; *Kuschel, t. c.* p. 81 (egg).

? Struthio australis, *Fischer* (*nec Gurn.*), *Zeitschr. ges. Orn.* 1884, p. 395 (E. Africa).

Blauhalsige [Strauss], *Rchnw. J. f. O.* 1888, p. 302 (E. Africa, between Pangani and the sea).

? Struthio sp., *Emin, J. f. O.* 1891, p. 58 (Ugogo).

Adult male. Differs from the male of *S. camelus* in having the naked skin of the head, neck, and legs of a bluish grey, the head and neck somewhat darker than the legs; besides on the vertex there is a horny plate of dirty yellowish, thickly surrounded with hairs, similar to a tonsure; there are no white feathers just at the beginning of the back: bill pale red, horn-yellow at the tip; the shields

* Burton, Pilgrim. El Medinah and Mecca, ii. p. 105.

in front of the tarsus are of a dull vermilion-red, changing into yellow on the lower part, and into black on the toes; the shields are surrounded with pale yellow horn-colour. Size somewhat larger than that of *S. camelus*.

Female. Similar to that of *S. camelus*, but the grey feathers somewhat darker.

Egg-shell with large, deep pits, generally of a dark-purple colour.

Hab. Somali-land and Central Africa.

a. ♂ ad. sk.	Somali-land.	Paris Museum [P.].
b. Skeleton.	Somali-land.	Paris Museum [P.].
c. Skull.	Somali-land.	Rowland Ward, Esq. [P.].

3. Struthio australis.

Black Ostrich, part., *Brown, Illustr.* pp. 37, 38 (Cape of Good Hope) (1776).

Ostrich, *Licht. Reise in südlichen Africa*, ii. p. 42 (1812).

Struthio camelus, *G. R. Gr. List B. Brit. Mus.* ii. p. 54 (part., Cape of Good Hope) (1844); *Thienem. Fortpflanz. Gesch. der ges. Vög.* p. 5, taf. 3 (egg) (1845); *id. Rhea*, i. pp. 16, 17, fig. 3 (structure of the egg-shell) (1846); *Tristr. Ibis*, 1860, p. 74 (part.); *Layard, Birds S. Afr.* p. 281, n. 539 (1867); *G. R. Gr. Hand-list*, iii. p. 1, n. 9841 (part.) (1871); *Schleg. Mus. P.-B.*, Struthiones, p. 6 (part., Cape of Good Hope) (1873); *Nathus. Zeitschr. f. wiss. Zool.* 1878, p. 225, t. 14. ff. 10, 11, 12, t. 15. ff. 11, 14 (structure of egg-shell); *Shell. Ibis*, 1882, p. 368 (S.E. Africa); *Holub u. Pelz. Beitr. Orn. S.-Afr.* pp. 195–226 (1882).

The Ostrich, *Anderss. Lake Ngami*, p. 253, pl. 7 (1854).

Southern Ostrich, *Bartl. P. Z. S.* 1860, p. 205; *Sclat. Tr. Zool. Soc.* iv. p. 354 (1862).

Struthio camelus, var. meridionalis, *Sclat. List Vert. An.* 1862, p. 71, specim. *c*, *d* (South Africa).

Struthio australis, *Gurn. Ibis*, 1868, p. 253 (S. Africa); *Anderss. B. Damara-Land*, p. 251 (1872); *Gurn. ibid.* pp. 254–257 (1872); *Buckl. Ibis*, 1874, p. 391 (Matabili country); *Harting & Mosenth. Ostriches & Ostr. Farm.* p. 16 (1877); *Gurn. Ibis*, 1884, p. 466; *Henke, Zeitschr. ges. Orn.* 1884, p. 220, t. 12 (egg, poster. fig.); *Sharpe, Layard's B. S. Afr.* p. 791 (1884); *Bodinus, J. f. O.* 1885, p. 13; *Cab. ibid.* p. 97; *Nathus. ibid.* p. 166, t. 2. f. 1, t. 3. ff. 4–8 (structure of egg-shell); *Rehnw. J. f. O.* 1886, p. 117; *Schal. J. f. O.* 1888, p. 118; ? *Rehnw. ibid.* p. 302 (west of Tanganyika?); *Ost, Zeitschr. f. Ool.* 1892, p. 34; *Gadow, Bronn's Thier-Reichs*, vi. 4, p. 103 (1893); *Schal. J. f. O.* 1894, p. 9; *A. Newt. Dict. of B.* p. 665 (pt. iii., 1894); *Nolte, J. f. O.* 1895, pp. 48, 55; *Kuschel, ibid.* p. 81 (egg).

Adult male. Head, neck, and legs lead-grey, sometimes in birds kept in confinement white-grey. Beak horn-colour surrounded with red, reddish at the base of the upper mandible, during the breeding-season entirely reddish: skin near the gape red, this colour extending sometimes on the cheeks; iris brown. Vertex naked, but with no horny shield as in *S. molybdophanes*. No distinct white band at the commencement of the feathering of the back, where, however, are

scattered some whitish feathers; feathers of the back deep black as in *S. molybdophanes*; quills and tail-feathers pure white, but sometimes mixed black and white; upper wing-coverts black. The shields on the tarsus are horn-colour, but during the breeding-season they become bright red. Size of *S. molybdophanes*.

Female. Similar to that of *S. molybdophanes*, but has no horny shield on the vertex; "colour of the feathers of the body from pale grey to dark brown" (*Nolte*).

Egg-shell with numerous small, generally dark-coloured pores.

Hab. Southern Africa *.

a, *b*. ♂ ♀ ad. st.	Hales Owen Farm, Cape Colony.	Purchased.
c–*f*. Pull. st.	Cape of Good Hope.	Capt. Alexander [C.].
g. Skeleton.	S. Africa (*Sir George Grey*).	Zool. Soc. (Type of species.)
h. Skeleton.	S. Africa.	
i. Skeleton.	Cradock, Cape Colony.	Capt. W. Hume Middlemass [P.].

* We do not know to which bird the following name refers. Dr. Sclater says that he is not sure "that this name is intended for either the Northern or Southern bird."

STRUTHIO EPOASTICUS.

Struthio epoasticus, *Bp. Compt. Rend.* xliii. p. 841, n. 1 *a* (1856); *Sclat. Ibis*, 1860, p. 75 (note); *id. P. Z. S.* 1860, p. 210 (note); *id. Tr. Zool. Soc.* iv. p. 355.

Prince Bonaparte, speaking of this supposed species, says:—"Une notable différence anatomique dans les os du pied (s'il n'était pas possible qu'elle fût le résultat d'une monstruosité), la petitesse de la taille (dont je ne m'exagère pas l'importance dans les oiseaux du désert), la dénudation plus étendue du tibia (pour ne pas parler de la différence dans la texture des plumes si changeantes par l'âge et par d'autres circonstances), et la non-incubation des œufs (variable avec les conditions atmosphériques?), autorisent-elles l'établissement de cette seconde Autruche?"

The following references belong to a mythical bird established on an unpublished and probably fanciful figure of Le Vaillant:—

STRUTHIO BIDACTYLUS.

Petit Gralle bidactyle, *Temm.*, ubi?; *G. R. Gr. List Gen. B.* 2nd ed. p. 84 (note) (1841).

Autruchon (*Temm.*), *G. R. Gr. List Gen. B.* 2nd ed. p. 84 (note) (1841); *Hartl. Ibis*, 1859, p. 344; *Sclat. Trans. Zool. Soc.* iv. p. 355 (1862).

Charadrius bidactylus, *G. R. Gr. Gen. B.* iii. p. 544, n. 46 (1847) (type of *Autruchon*, Temm.).

Struthio bidactylus, *Temm.* fide *Heugl. Orn. N.O.-Afr.* ii. 1. p. 935 (1873).

Didactyle Ostrich, *Heugl. Ibis*, 1859, p. 344 (south of Fazogloa, near Djebel Dul).

Autruchon bidactylus, *G. R. Gr. Hand-list*, iii. p. 1, no. 9841 *a* (1871).

Dr. Sclater (*l. c.*) says:—"In the interior of Africa there is said, by some of the older writers, to exist a diminutive Ostrich (*L'Autruchon*). I have lately

Order II. RHEÆ.

Three front toes present; hallux absent; middle phalanges shortened.

Maxillo-palatines large, fenestrated, not touching the vomer. Palatines short, articulating with the vomer.

Procoracoid process large. No clavicles.

Tibia without bony bridge.

Aftershaft absent. Quills very large. No tail-feathers.

Cæca large.

Syrinx tracheo-bronchial, with one pair of syringeal muscles.

Neotropical.

Rheas are smaller birds than Ostriches. Their external characters are as follows:—

Bill moderate, depressed, and broad, with the culmen flattened and curved at the tip, which overlaps that of the under mandible; the nostrils large, oval, and placed in the middle of the bill in a large membranous groove; the membrane extends over the base of the culmen. Neck long, feathered. Wings short, imperfect, and furnished with long soft feathers. Tail not apparent. Tarsi very long, strong, and covered in front with broad transverse scutes. Toes short, the lateral ones shorter than the middle one, and unequal, the inner the shortest; the claws moderate, strong, and compressed.

Only one family.

Family RHEIDÆ.

1. RHEA.

	Type.
Rhea, *Lath. Ind. Orn.* i. p. 665, gen. lxiii. (1790); *Bonn. Enc. Méth.* i. Introd. p. xcii (1790)	R. americana.
Toujou, *Lacépède, Mém. Inst.* iii. p. 519, gen. 128 (1801) (=Rhea, *Lath.*).	

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received some information on this subject from Mr. J. Petherick, H.B.M. Consul for the Soudan, who tells me that his hunters have actually had this bird alive; and I have requested him to endeavour to procure further evidence on the point."

Heuglin, from an independent source, nearly repeats the same thing:—"I was told by a rather trustworthy man, a hunter, that south of Fazogloa, near Djebel Dul, there existed a little *didactyle Ostrich*, not higher than *Otis arabs*, but in figure and colour much like *S. camelus*" (!).

Tujus, *Rafinesque, Analyse*, p. 70 (1815). Type.
Pterocnemia, *G. R. Gr. Hand-list*, iii. p. 2, subgen. 2460 (1871) ..... R. darwini.
Pterocnemys, *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 154 (1873) (=Pterocnemia, *Gr.*).

Range. Confined to South America.

[*Cf.* GADOW, H., "On the Anatomical Differences in the three Species of *Rhea*" (P. Z. S. 1885, pp. 308–321).]

Key to the Species.

a. Metatarsus with transverse scutes through its length; feathers greyish, more or less blackish on the head and neck, and with no white tips.
  a'. Generally lighter; skull broader..... *americana*, p. 578.
  b'. Generally darker, especially on the head; skull narrower..... *macrorhyncha*, p. 581.
b. Metatarsus with transverse scutes on distal half only, feathered in front on the upper parts; general plumage brown, most of the feathers with white tips .... *darwini*, p. 582.

Note.—*Rhea nana*, much smaller than the other species, is known at present only from the egg (P. Z. S. 1894, p. 654), and has been described by Lydekker, Knowledge, xvii. 1894, p. 265; or in 'Revista del Museo de la Plata,' vi. 1894, p. 103 (with fig. of egg). —Patagonia.

1. Rhea americana.

Nhandu-gnacu brasiliensibus, *Marcgr. Hist. Nat. Bras.* p. 190 (1648); *Piso, Hist. Nat. Bras.* p. 84, with fig. (1648).
Struthio camelus americanus, *Ray, Syn. Av.* p. 36 (1713).
Rhea, *Moehr. Av. Gen.* p. 55 (1752); *Briss. Orn.* v. p. 8 (syn. emend.) (Guiana! and Brazil) (1760).
Struthio americanus, *Linn. S. N.* (ed. 10) i. p. 155, n. 3 (America Australi) (1758) (*ex Marcgrave and Piso*); *Hammer, Ann. du Mus.* xii. pp. 427–433 (1808).
Struthio rhea, *Linn. S. N.* (ed. 12) i. p. 266, n. 3 (syn. emend.) (1766)*; ? *Molina, Saggio Stor. nat. Chili*, p. 232 (part.) (1782); *Gm. S. N.* i. 2, p. 727, n. 3 (part.) (1788); *Hammer, Ann. du Mus.* xii. pl. 39 (1808); *Cuv. Règne An.* i. p. 461 (1817); *id. op. cit.* 2nd ed. i. p. 496 (1829); *Haughton, Pr. R. Irish Acad.* ix. pp. 497–504 (myology) (1868).

* I am almost sure that *Struthio americanus*, Linn., and *S. rhea*, Linn., founded on Marcgrave and Piso's descriptions, refer to the more northern species, *Rhea macrorhyncha*, Sclat.; but the change would now be rather too revolutionary, and the creation of a new name for the Southern species perhaps not very welcome! The existence of the Southern form in South Brazil may show that the more conservative ornithologists are right!

Touyou, *Buff. Hist. Nat. Ois.* i. p. 452 (1770).

Rhea americana, *Lath. Ind. Orn.* ii. p. 665, n. 1 (part.) (1790); *Vieill. N. D.* xxii. p. 199, pl. G 37 (1818); *Steph. Gen. Zool.* xi. 2, p. 436, pl. 28 (1819); ? *Wied, Reise nach Bras.* ii. pp. 187, 192 (part. ?)(1821); *Ranz. El. di Zool.* iii. 1, p. 93 (1821); ? *Licht. Verz. Doubl.* p. 69, n. 710 (San Paulo) (1823); *Vieill. Enc. Méth.* iii. p. 1030 (1823); *id. Gal. des Ois.* ii. p. 74, pl. 224 (1825); *Drap. Dict. Class. d'Hist. Nat.* xiv. p. 449 (Brazil, Chili, Peru, Magellan) (1828); *Less. Tr. d'Orn.* p. 6, pl. i. f. 2 (1831); ? *Wied, Beitr. Naturg. Bras.* iv. p. 559 (part., Rio Grande do Sul) (1832); *Martin, P. Z. S.* 1834, p. 9; *D'Orb. Voy.* ii. p. 303, n. 2 (note) (1835–38); *Sw. Class. B.* ii. p. 346 (1837); *Darwin, P. Z. S.* 1837, p. 35 (La Plata, South to the Rio Negro); *Temm. Pl. Col.* i., *Tabl. Méth.* p. 88 (1838); *Darw. Zool. Voy. Beagle*, iii. p. 120 (1841); *Gulliv. P. Z. S.* 1842, p. 141 (blood-corpuscles); *G. R. Gr. Gen. B.* iii. p. 527, n. 1 (1844); *id. List B. Brit. Mus.* iii. p. 54 (1844); *Thienem. Fortpflanz. ges. Vög.* Erst Heft, p. 4, t. ii. f. 1 (egg) (1845); *id. Rhea*, i. Heft, 1846, p. 16, f. 2 (structure of egg-shell); *J. E. Gray, Knowsl. Menag.* pl. 12 (1846); *Yarrell, P. Z. S.* 1847, p. 54 (egg); *Hartl. Ind. Azar. Apunt.* p. 22, n. 339 (1847); *Rchnb. Syn. Av.*, Gallinaceæ, t. 388. ff. 2194–95 (1848); *id. Av. Syst. Nat.* p. xxx (1852); *Hartl. J. f. O.* 1854, p. 257 (in confinement); *Altum, ibid.* p. xxvii; *Des Murs in Casteln. Exp. Am. du Sud, Ois.* p. 94 (Rio Mandego, near Miranda) (1855); *Bolle, J. f. O.* 1856, p. 169 (Zool. Gard.); *Burm. Syst. Uebers. Thier. Bras.* iii. p. 352 (Sabara, St. Lucia, Lagoa Santa) (1856); *Bp. Compt. Rend.* xliii. p. 841, n. 1 (1856); *Wyman, Pr. Bost. Soc. N. H.* vi. p. 127 (1857); *Burm. J. f. O.* 1858, p. 154; *Homeyer, J. f. O.* 1859, p. 365 (in confinement); *Ed. Ibis*, 1859, p. 115 (Zool. Gard.); *Sclat. P. Z. S.* 1859, p. 205 (incubation), 1860, pp. 207, 208, f. 2 (head), p. 210; *id. Ann. & Mag. N. H.* (3) vi. pp. 142, 143, f. 2 (head) (1860); *Ed. Ibis*, 1860, p. 310 (Zool. Gard.); *Burm. J. f. O.* 1860, p. 260 (Mendoza); *id. La Plata-Reise*, ii. p. 500 (1861); *Sclat. Rep. Brit. Assoc. Adv. Sc. for* 1861–62, *Misc. Comm.* p. 158 (1862); *id. Trans. Z. S.* iv. 1860, p. 355, f. 1 (head), pl. lxviii. (1862); *Crisp, P. Z. S.* 1862, p. 137 (gall-bladder); *Sclat. P. Z. S.* 1863, p. 234; *Böcking, Arch. f. Naturg.* 1863, i. pp. 213–241 (part.); *id. De Rhea Americana, Diss. Zool.* pp. 32 (1863); *Ed. Ibis*, 1864, p. 123; *Schleg. De Dierent.* p. 236 (1864); *Crisp, Rep. Brit. Assoc. Adv. Sc. for* 1864, 1865, *Misc. Comm.* pp. 92, 93; *Parker, Phil. Trans.* 1866, pp. 113–183; *Schmidt, Zool. Gart.* 1866, pp. 8–14; *J. L. Fitzinger, t. c.* pp. 131–133; *Huxley, P. Z. S.* 1867, p. 421, f. 2 (skull); *Cunningh. Ibis*, 1868, p. 126 (Patagonia); *Anon. Aus der Natur*, xliv. oder n. F. xxxii. pp. 300–303, 315–318, 329–333 (1868); *Sclat. P. Z. S.* 1869, p. 628; *Nathus. Zeitschr. f. wiss. Zool.* 1869, p. 322, t. 26. f. 1; *Sternberg, J. f. O.* 1869, p. 275; *S[enoner], Zool. Gart.* xi. pp. 34–35 (1870); *Holtz, J. f. O.* 1870, p. 24 (egg); ? *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 46 (Lagoa Santa); ? *Pelz. Orn. Bras.* p. 295 (Ytararè, Cuyaba, Caiçara, Matto Grosso), pp. 354, lvi (part.) (1871); *Cunningh. P. Z. S.* 1871, pp. 105, 110, pls. vi. & vi. *a* (osteology); *G. R. Gr. Hand-list*, iii. p. 1, n. 9842 (1871); *Sperling, Ibis*, 1872, p. 78; *Hudson, P. Z. S.* 1872, p. 535; *Sundev. Meth. nat. Av. disp. Tent.* p. 152 (1872); *Pelz. Ibis*, 1873, p. 37; *Schleg. Mus. P.-B.*, Struthiones, p. 6 (1873); *Garrod, P. Z. S.* 1873, p. 644; *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 154, n. 1

(1873); *Leybold, Excurs. Pampas Arjent.* p. 85 (1873), *cf. v. Mart. J. f. O.* 1875, p. 444; *Taiber, La Plata Monatsschr.* 1874, p. 22; *Anon. Aus der Natur*, lxiv. oder n. F. liii. pp. 258, 259 (1874); *Gigl. Viaggio Magenta*, pp. 70, 75, 82, 962 (1875); *Gulliv. P. Z. S.* 1875, pp. 478, 488 (blood-corpuscles); *Mivart, Trans. Z. S.* x. 1874, pp. 1–52 (1877); *Harting, Ostrich. & Ostrich Farm.* pp. 55–84, fig. p. 56, pl. to face p. 58 (1877); *Gieb. Thes. Orn.* iii. p. 423 (1877); *Forbes, P. Z. S.* 1877, pp. 306, 307 (bursa Fabricii); *Gadow, J. f. O.* 1877, pp. 186, 187, 188 (anatomical details); *Davis, Oologist*, iv. 1, March 1878, pp. 5, 6; *Beerbohm, Wander. in Patag.* p. 52 (1879); *id. Chicago Field*, xi. no. 6, March 22, 1879, p. 92; *id. Ibis*, 1879, p. 386; *Gibson, Ibis*, 1880, p. 167 (Buenos Ayres); *Durnf. ibid.* p. 414; *Schmidt, P. Z. S.* 1880, p. 315; *Oudot, Lerm. des Autr.* p. 220 (1880); *Remonchamps, Bull. Ac. Belg.* (2) i. p. 115 (1880); *id. Arch. Biol.* i. p. 583, pl. xxxv. (glande gastrique) (1880); *Forbes, Ibis*, 1881, p. 361; *id. P. Z. S.* 1881, pp. 784, 785, figs. 7, 8 (trachea); *Reinh. Vid. Medd. Nat. For. i Kjöbenh.* 1881, pp. 141–153; *id. Ibis*, 1882, pp. 322, 332 (fossil, Brazil); *Raveret-Wettel, Bull. Soc. Acclim.* 1882, p. 64; *Sclat. List Vert. An.* 8th ed. p. 552, f. 59 (head) (1883); *Evans, Ann. N. H.* (5) xi. p. 458 (the right carotid present in the young) (1883); *Mellier, Bull. Soc. Acclim.* 1884, pp. 111, 112, 916 (in captivity); *Berenger, ibid.* p. 916; *v. Boeck, Mitth. orn. Ver. in Wien*, 1884, p. 166 (E. Bolivia and on the Cordilleras of Tacora near Tacna), *cf. Ibis*, 1886, p. 366; *Gibson, Ibis*, 1885, p. 283 (Paysandu, Uruguay); *Gadow, P. Z. S.* 1885, pp. 308–322, ff. 1, 4 (skull); *Claraz, P. Z. S.* 1885, pp. 324–327; *Beddard, t. c.* p. 839; *A. Newt. Enc. Brit.* 9th ed. xx. p. 505 (1886); *Berl. J. f. O.* 1887, p. 127; *Zander, SB. Ges. Königsb.* 1888, pp. 31, 32; *Burm. An. Mus. Nac. Buen. Air.* iii. p. 245 (1888); *Sclat. & Huds. Argent. Orn.* ii. p. 216, with fig. of head (1889); *Heine u. Reichw. Nom. Mus. Hein. Orn.* p. 305 (1890); *Evans, Ibis*, 1891, pp. 53, 85 (incubation); *Oust. Miss. Sc. Cap Horn, Ois.* p. 323 (1891); *Frenzel, J. f. O.* 1891, p. 124; *Ost, Zeitschr. Oologie*, 1892, p. 34; *G. Kerr, Ibis*, 1892, p. 151 (Gran Chaco); *Holland, t. c.* p. 214 (Estancia Espartilla, Argentine; pure white varieties); *Sclat. P. Z. S.* 1892, p. 472; *Allen, Bull. Am. Mus. N. H.* v. p. 152 (Matto Grosso) (1893); *Gadow, Bronn's Thier-Reichs*, vi. 4, *Vögel*, p. 103 (1893); *Schal. J. f. O.* 1894, p. 12 (oology); *Aplin, Ibis*, 1894, p. 214 (Uruguay); *A. Newton, Dict. of B.* pp. 787, 788, fig. in p. 786 (pt. 3, 1894).

American Rhea, *Lath. Syn. Suppl.* ii. p. 292, pl. 137 (1801).

Churí, Nandu, Avestruz, *Azara, Apunt.* i. p. 89, n. 339 (1805); *id. Voy.* (*ed. Somm.*) iv. p. 170, *Atlas*, pl. 25 (1809).

Rhea rhea, *Illig. Prodr. Mamm. et Av.* p. 247 (1811); *Flem. Phil. of Zool.* ii. p. 257 (1822).

Autruche d'Amérique, *D'Ambournay, Préc. anal. des Trav. de l'Acad. roy. de Rouen*, vi. (1771–1780) pp. 142–144 (1819).

Rhea nandu, *Less. Man. d'Orn.* ii. p. 208 (1828).

Rhea, *Heron, P. Z. S.* 1841, p. 79 (breeding in confinement); *id. Ann. & Mag. N. H.* ix. pp. 344, 345 (1842); *Derby, P. Z. S.* 1842, p. 147 (hatching in confinement).

Nandou, *L. A. Gosse, Bull. Soc. Acclim.* iii. pp. 295–297 (1856); *Vavasseur, op. cit.* v. pp. 388–394 (1858); *Martin, op. cit.* vii. pp. 182–186 (1860).

Hybrid.

Rhea americana ♀ × R. macrorhyncha ♂, *Sclat. P. Z. S.* 1863, p. 234.

Albino.

Rhea americana, Albino variety, *Darwin, in Zool. of the 'Beagle,'* iii. p. 121 (note) (1841).

Rhea albescens, *Arribalzaga & Holmberg, El Naturalista Argentino,* i. (1878) pp. 1–4 (sep. copy) (Carhué, on Buenos Aires frontier; many examples).

Also Molina and some recent authors mention white varieties of *R. americana.*

Adult male. General plumage grey; head blackish above; neck whitish, with the shafts of the feathers and a band along the nape black; the band spreads into a broad patch between the shoulders; base of the neck beneath black, whence arise two black lateral crescents, one on each side of the upper breast; rump, lower parts, and the feathers of the legs whitish; secondaries brown on the apical half, some of the inner ones partly or even entirely white: bill and feet yellowish horn-brown; iris brown. Total length about 52 inches, bill from gape 4·5, tarsus 11–12.

The *female* is paler than the male.

Hab. Bolivia and Matto Grosso, Paraguay, Uruguay, and Argentine Republic; apparently also Southern E. Brazil.

a. Ad. st.	S. America.	Sir Robert Harvey [P.].
b. Ad. st.	S. America.	John Tyler, Esq. [P.].
c, d. Pull. st.	S. America.	Purchased.
e, f. Pull. st.	S. America.	Zool. Soc.
g. Ad. sk.	Argentine Republic.	H. Durnford, Esq. [C.].
h. Skeleton.	Rio Grande do Sul.	Dr. von Ihering [P.].
i. Imperfect skeleton.		Purchased.
k. Imperfect skeleton.		Zool. Soc.
l. Imperfect skeleton of young bird.		Zool. Soc.
m. Skull.		

2. Rhea macrorhyncha.

? Nhandu-guacu brasiliensibus, *Marcgr. Hist. Nat. Bras.* p. 190 (1648); *Piso, Hist. Nat. Bras.* p. 84, with fig. (1648).

? Struthio camelus americanus, *Ray, Syn. Av.* p. 36 (1713).

? Rhea, *Moehr. Av. Gen.* p. 55 (1752); *Briss. Orn.* v. p. 8 (syn. emend.) (Guiana! and Brazil) (1760).

? Struthio americanus, *Linn. S. N.* (ed. 10) i. p. 155, n. 3 (America Australi) (1758) (*ex Marcgrave and Piso*).

? Struthio rhea, *Linn. S. N.* (ed. 12) i. p. 266, n. 3 (syn. emend.) (1766).

? Tuyew or Emu, *Stedman, Narr. of an Exped. to Surinam* (London, 1806).

Rhea americana, *Wied, Reise nach Bras.* ii. pp. 187, 192 (part.?) (1821); *Licht. Verz. Doubl.* p. 69, n. 710 (San Paulo) (1823); *Wied, Beitr. Naturg. Bras.* iv. p. 559 (part., Campo Geral, Rio San Francisco, Prov. Pernambuco) (1832); ? *Licht. Nom. Av.* p. 88 (Brazil) (1854); *Burm. Syst. Uebers. Thier. Bras.* iii. p. 352 (part.) (Campos, interior of Brazil) (1856); *Reinh. Vid. Medd. naturh. Foren. Kjöbenh.* 1870, p. 46 (Rio San Francisco).

Rhea macrorhyncha, *Sclat. P. Z. S.* 1860, pp. 207, 208, f. 1 (head), p. 210 (*ex* patria ignota); *id. Ann. & Mag. N. H.* (3) vi. pp. 142, 143, f. 1 (head) (1860); *id. Ibis*, 1860, p. 310; *id. Rep. Brit. Assoc. Adv. Sc. for* 1861, *Misc. Comm.* p. 158 (1862); *id. Trans. Z. S.* iv. p. 356, f. 2, pl. lxix. (1862); *Cunningh. P. Z. S.* 1871, p. 105; *G. R. Gr. Hand-list*, iii. p. 2, n. 9843 (1871); *Sclat. & Salv. Nom. Av. Neotrop.* p. 154, n. 2 (*ex* loco ignoto) (1873); *Harting, Ostriches & Ostr. Farm.* pp. 92, 93, with fig. of the head (1877); *Sclat. P. Z. S.* 1877, p. 160 (N.E. Brazil); *Gieb. Thes. Orn.* iii. p. 424 (1877); *Forbes, Ibis*, 1881, pp. 316, 325, 356, 360 (N.E Brazil); *id. P. Z. S.* 1881, pp. 784, 786 (trachea); *Parker, P. Z. S.* 1883, pp. 141, 142 (respiratory organs); *Sclat. List Vert. An.* 8th ed. p. 553, f. 60 (head) (Maranham and Pernambuco) (1883); *Finsch, Ibis*, 1884, p. 353; *Gadow, P. Z. S.* 1885, pp. 308–322, ff. 2, 5 (skull), f. 9 (trachea); ? *Claraz, t. c.* pp. 324, 325 (eggs); *Sclat. ibid.* p. 327 (=either *R. americana* or *R. darwini*); *Gadow, Bronn's Thier-Reichs*, vi. 4, *Aves*, p. 104 (1893); *Schal. J. f. O.* 1894, p. 13; *A. Newton, Dict. of B.* pp. 787, 788 (pt. 3, 1894).

Ema, *Burton, Highlands of Brazil*, ii. p. 26 (Minas), p. 296 (Rio San Francisco) (1869).

Very similar to *R. americana*, but is distinguishable by its generally browner colouring, by the darker crown, which is nearly black, and by its longer and narrower bill.

Immature birds have the plumage of a tawny brown (*Forbes*).

Hab. N.E. Brazil, principally the provinces of Pernambuco and Bahia.

a, b. Ad. st. & skel., ♂.	Brazil.	Zoological Society. (Type of species.)
c. Ad. sk.		

3. Rhea darwini.

Emu near to the Strait of Magellan, *Dobrizhoffer, Account of the Abipones* (Engl. transl.) i. p. 314 (1784).

Troisième espèce d'Autruche, *D'Orb. Bull. Sc. Nat.* vol. xix. p. 221 (1829); *id. Ann. Sc. Nat.* xxi. *Revue Bibliogr.* p. 16 (1830).

Ilhui of the Patagonians, *D'Orb. ll. cc.*

Cosquella of the Pampas, *D'Orb. ll. cc.*

Rhea, n. sp., *Darwin, Letters*, p. 16 (1834) (*cf. G. R. Gr. Gen. B.* iii. p. 527).

Rhea pennata, *D'Orb. Voy. Amér. Mér., Itin.* ii. p. 67 (note), p. 194 (note), pp. 212, 303, n. 3 (note) (1835–38) (descr. incompleta); *id. Wiegm. Arch.* 1839, i. p. 56; *Wiegm. ibid.* (note,= Rh. darwinii); *G. R. Gr. List B. Brit. Mus.* iii. p. 54 (1844);

Thienem. Fortpflanz. ges. Vögel, Erst Heft, p. 4, t. ii. f. 2 (egg) (1845); *Chenu & Des Murs, Enc. d'Hist. Nat., Ois.* vi. p. 303 *. Rhea darwinii, *Gould, P. Z. S.* 1837, p. 35; *Darwin, ibid.* p. 36 (Rio Negro, N. Patagonia); *Charlesw. Mag. Nat. Hist.* (2) i. p. 504 (1837) (=R. pennata, *D'Orb.*); *Ed. Mag. of Zool. & Bot.* ii. pp. 92, 93 (1838); *Gould, Isis*, xxxii. p. 144 (1839); *id. Voy. 'Beagle,' Birds*, p. 123, pl. 47 (1841); *G. R. Gr. Gen. B.* iii. p. 527, n. 2, pl. 138 (1844); *Rchnb. Syn. Av.*, Gallinaceæ, t. 388. ff. 2196–97 (1848); *Hartl. J. f. O.* 1854, *B.* pp. lxii, lxiii; *Burm. Syst. Uebers. Thier. Bras.* iii. p. 352 (Anm.) (1856); *Bp. Compt. Rend.* xliii. p. 841, n. 3 (1856); *Ed. Ibis*, 1859, p. 115 (Zool. Gard.); *Sclat. P. Z. S.* 1860, pp. 207, 208. 209, f. 3 (head), p. 210; *id. Ann. & Mag. N. H.* (3) vi. pp. 142, 144, f. 3 (head) (1860); *id. Ibis*, 1860, p. 310; *id. Rep. Brit. Assoc. Adv. Sc. for* 1861, 1862, *Misc. Comm.* p. 158 (1862); *id. Trans. Z. S.* iv. 1860, p. 357, f. 3 (head), pl. lxx. (1862); *? Leadb. P. Z. S.* 1863, p. 1 (egg); *Ed. Ibis*, 1864, p. 123; *Schleg. De Dierent.* fig. p. 237 (1864); *Phil. & Landb. Cat. Av. Chil.* (Mendoza) (*An. Univ. Chile*, xxxi. p. 270, 1868); *Sternb. J. f. O.* 1869, p. 274; *Holtz, J. f. O.* 1870, p. 20 (egg); *Cunningh. Nat. Hist. Str. of Magell.* p. 134 (1870); *id. P. Z. S.* 1871, pp. 105, 110, pls. vi., vi. *a* (osteology); *Hudson, P. Z. S.* 1872, pp. 534, 535; *Schleg. Mus. P.-B.*, Struthiones, p. 7 (1873); *Leybold, Excurs. Pampas Arjent.* p. 85 (1873), *cf. Mart. J. f. O.* 1875, p. 444; *Gigl. Viaggio Magenta*, pp. 955, 962 (1875); *Harting, Ostriches & Ostr. Farm.* pp. 85–92 (1877); *Gieb. Thes. Orn.* iii. p. 424 (1877); *Durnf. Ibis*, 1877, p. 46 (Chuput Valley, Patagonia), 1878, p. 406 (C. Patagonia); *Beerbohm, Wander. in Patag.* p. 50 (1879); *id. Ibis*, 1879, p. 385; *Forbes, Ibis*, 1881, p. 176; *Sclat. List Vert. An.* 8th ed. p. 554, f. 61 (head) (1883); *Parker, P. Z. S.* 1883, pp. 141, 142 (respiratory organs); *Gadow, P. Z. S.* 1885, pp. 308–322, ff. 3, 6 (skull), f. 8 (digest. organs), f. 10 (trachea), f. 11 (foot); *Claraz, P. Z. S.* 1885, pp. 324–327; *A. Newt. Enc. Brit.* 9th ed. xx. p. 506 (1886); *Ball, Notes of a Natural. in S. Amer.* p. 261 (1887); *Philippi, Ornis*, iv. p. 159 (Atacama) (1888); *Sclat. & Huds. Argent. Orn.* ii. p. 219, fig. of head (1889); *Heine u. Rchnw. Nomencl. Mus. Hein. Orn.* p. 305 (1890); *Sclat. P. Z. S.* 1890, p. 412 (Tarapacá), 1891, pp. 132, 137 (Canchosa, Tarapacá); *Oust. Miss. Sc. Cap Horn, Ois.* pp. 247, 334 (1891); *Sharpe, Cat. Ost. Specim. R. C. S.* iii. p. 419 (1891); *Berk. James, New List Chil. B.* p. 14, n. 255 (Tarapacá) (1892); *Sclat. P. Z. S.* 1892, p. 472 (in captivity); *Ost, Zeitschr. f. Oologie*, 1892, p. 34; *Blaauw, P. Z. S.* 1893, p. 532; *Schal. J. f. O.* 1894, p. 11 (oology); *A. Newton, Dict. of B.* pp. 787, 788 (pt. 3, 1894).

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* According to Des Murs, named by D'Orbigny in 1830 in his correspondence with Isidore Geoffroy Saint-Hilaire. It seems probable that D'Orbigny's name has really the priority over that of Gould, as appears from the following notice published in 'The Magazine of Natural History,' &c., New Series, conducted by Edward Charlesworth, vol. i. p. 504, September 1837:—"We observe by a letter which lately appeared in one of the French scientific journals, that M. D'Orbigny claims the right of having first described the *Rhea* brought home by Mr. Darwin from South America, and which Mr. Gould named a few months since *R. Darwinii*. It appears that D'Orbigny gave it the specific appellation of *R. pennata*." I have not been able to find the French journal containing D'Orbigny's letter.

? Rhea americana, *Tsch.* (*nec Linn.*) *Wiegm. Arch.* 1844, i. p. 309 (Peru); *id. Faun. Per., Aves*, pp. 48, 593 (1846); *Tacz. Orn. Pér.* iii. p. 500 (1886).
Avestinz petizo, *L. A. Gosse, Bull. Soc. Acclim.* iii. p. 297 (1856).
Rhea americana, subsp. darwinii, *Böcking, Arch. f. Naturg.* 1863, i. p. 213.
Struthio darwinii, *Sternberg, J. f. O.* 1869, p. 274.
Pterocnemia darwinii, *G. R. Gr. Hand-list*, iii. p. 2, n. 9844 (1871).
Ostrich [from Patagonia], *Chaworth-Masters, At Home with the Patagonians*, p. 76 (1872).
Pterocnemis darwinii, *Sclat. & Salv. Nomencl. Av. Neotrop.* p. 154 (1873).
Avestruz petise, *Darw. Natural. Voy. round the World*, pp. 92–94 (1882).

Adult. General plumage buff-brown, most of the feathers of the back and of the quills with white tips; beneath, throat and neck buff-brown, rest of the under surface whitish; front of tarsus feathered on the upper part, then covered with small reticulate scutes, and on the lower part with transverse scutes: bill horn-brown; feet yellowish; iris brown. Total length about 36 inches, bill from gape 3·6, tarsus 11.

The plumage of the *young* is dusky grey, without white and black feathers (*Hudson*).

The young are hatched with the legs feathered to the toes.

Hab. Patagonia, Argentine Republic, and Chili, as far north as the Province of Tarapacá.

a–d. ♂ ad. st. et juv. et pull. st.	[Chili.]	T. Bridges, Esq. [C.].
e. Ad. st.		
f, g. Juv. et pull. st.		Zool. Soc.
h–l. ♂ ad. et juv. sk.	Canchosa, Chili, Feb., April.	H. Berkeley James, Esq. [P.].
m. Imperfect skeleton.		

Order III. CASUARII.

Hallux absent. Three front toes, with claws; middle phalanges shortened.

Maxillo-palatines large, fused with vomer and præmaxilla.

Vomer long, articulating with palatines and pterygoids.

Procoracoid process small. Clavicles rudimentary. Tibia without bony bridge.

Aftershaft very large, as long as the principal shaft.

Cæca small, functional.

Australasian.

Key to the Families.

a. No casque on the head; bill broad .. 1. **Dromæidæ**, p. 585.
b. A casque on the head; bill narrow .. 2. **Casuariidæ**, p. 590.

Family I. DROMÆIDÆ.

The *Dromœidæ*, containing only one genus, *Dromœus*, have the bill moderate and broad, with the culmen at the base elevated and sloping to the tip, which overlaps that of the under mandible; the nostrils placed in a large membranous groove, with the opening anteriorly and oblong oval. Wings rudimentary. Tail not apparent. Tarsi very long, strong, and mostly covered in front with reticulated scutes, except near the toes, where there are a few transverse ones, and posteriorly with a series of rough scales. Toes moderate, the lateral ones unequal, the inner one the shortest; the claws moderate, strong and obtuse.

Range. Confined to Australia.

1. DROMÆUS.

Type.

Dromiceius (*errore*), *Vieill. Analyse*, p. 54 (1816).. D. novæ hollandiæ.
Dromaius, *Vieill. op. cit.* p. 20 (1816): *id. N. D.* x. p. 211 (1817).
Dromæus, *Ranz. El. di Zool.* iii. 1. p. 88 (1821).
Tachea, *Flem. Phil. of Zool.* ii. p. 257 (1822) .... D. novæ hollandiæ.
Dromiceus, *Sw. Class B.* ii. p. 346 (1837).
Dromiceius, *A. Newton, Dict. of B.* p. 213 (note) (pt. 1, 1893).

Range. Confined to Australia.

Key to the Species.

a. Feathers of the body uniform greyish, with the tips black.
  a'. Larger: total length about 78 inches; feathers of the neck greyish, with the tips black ..... *novæ hollandiæ*, p. 586.
  b'. Smaller: total length about 55 inches; feathers of the neck entirely black .... *ater*, p. 588.
b. Feathers of the body barred alternately with silky white and darkish grey throughout their length, terminating in a black tip, margined posteriorly with rufous ..... *irroratus*, p. 589.

1. Dromæus novæ hollandiæ.

New Holland Cassowary, *Phillip, Bot. Bay*, p. 271, c. fig. (1789); *White, Journ. Voy. N. S. Wales*, p. 129, c. fig. (1790); *Lath. Syn. Suppl.* ii. p. 290 (1801).

Casuarius novæ hollandiæ, *Lath. Ind. Orn.* ii. p. 665, n. 2 (1790); *Bonn. Enc. Méth.* i. p. 5 (1790); *Shaw, Nat. Misc.* iii. pl. 99 (1792); *Illig. Prodr. Mamm. et Av.* p. 247 (1811); *Fremery, Progr. Specim. zool. sistens obs. præs. osteol. de Casuario Novæ Hollandiæ*, pp. 1–86 (1819); *Cur. Règn. An.* 2nd ed. i. p. 497 (1829); *Thienem. Fortpfl. ges. Vög.* i. Heft, p. 3, t. i. f. 2 (egg) (1845).

Struthio novæ hollandiæ, *Meyer, Syst.-Summar. Uebers. d. neust. zool. Entd. in Neuholl. u. Afrika*, p. 59 (1793) (*fide Ranzani*).

Emu of New South Wales, *Collin's Voy.* ii. pl. iv. p. 307 (1802).

Dromiceius novæ hollandiæ, *Vieill. Analyse*, p. 54 (1816); *Steph. Gen. Zool.* xi. 2, p. 439 (1819); *Less. Man.* ii. p. 210 (1828).

Dromaius ater, part., *Vieill. N. D.* x. p. 212 (1817); *Less. Tr. d'Orn.* p. 9 (part.), pl. 2. f. 2 (1831); *Parker, P. Z. S.* 1863, p. 517 (sacral vertebræ).

Dromæus novæ hollandiæ, *Ranz. El. di Zool.* iii. 1, p. 99 (1821); *Bp. Compt. Rend.* xliii. p. 841, n. 4 (1856); *Bartl. P. Z. S.* 1859, p. 205, 1860, p. 205; *Sclat. P. Z. S.* 1860, pp. 211, 248, 372; *Geoffr. St.-Hil. Acclim. et Domest. An. Utiles*, éd. iv. p. 403 (1861); *Sclat. Trans. Z. S.* iv. p. 360, pl. lxxv. (1862); *id. P. Z. S.* 1863, p. 234 (incubation); *Holland, J. f. O.* 1864, p. 199; *Haughton, Pr. R. Irish Acad.* ix. pp. 487–497 (muscular system) (1865); *Hartm. Zool. Gart.* 1866, pp. 69–72 (breeding); *Parker, Phil. Trans.* 1866, pp. 113–183; *Murie, P. Z. S.* 1867, pp. 405–475 (tracheal pouch); *Huxley, t. c.* p. 422, f. 3 (under view of the skull); *Sclat. P. Z. S.* 1869, p. 628 (breeding); *Sundev. Meth. nat. Av. disp. Tent.* p. 152 (1872); *Coughtrey, Pr. Liverp. Soc.* 1872–73, pp. 293–299; *id. Ann. & Mag. N. H.* (4) xii. p. 217 (1873) (tracheal pouch); *id. Pr. Liverp. Soc.* 1872–73, pp. 327–333 (1873) (heart); *Pelz. Ibis*, 1873, p. 120; *Garrod, P. Z. S.* 1873, p. 470 (both carotids), p. 644 (muscles); *Gieb. Thes. Orn.* ii. p. 59 (part.) (1875); *Bodinus, J. f. O.* 1876, p. 341 (breeding); *Harting & Mosenth. Ostriches & Ostr. Farm.* pp. 131–144, fig. p. 132 (1877); *Forbes, P. Z. S.* 1877, p. 314, f. 5 (vent); *Ed. Ibis*, 1877, p. 237 (note); *Gibson, Pr. Phys. Soc. Edinb.* 1876–78, p. 200 (reared in Scotland); *Nathus. J. f. O.* 1879, p. 246; *Malm, Œfv. Ak. Förh.* 1880, pp. 33–43, pl. vi. (tracheal pouch);

Schmidt, P. Z. S. 1880, p. 315 (duration of life); *Oudot, Ferm. d'Autr.* p. 241 (1880); *Forbes, P. Z. S.* 1881, p. 784 (trachea); *Sclat. List Vert. An.* 8th ed. p. 550 (part.) (1883); *Haswell, Pr. Linn. Soc. N. S. W.* (2) ii. pp. 577–600, pls. viii.–xx., cuts (development) (1887); *Gadow, Zool. Jahrb.* v. pp. 636–638, tt. xliii., xliv. (tracheal pouch) (1890); *Evans, Ibis,* 1891, p. 84 (incubation); *Hartert, Kat. Vogelsamml.* p. 249, n. 3610 (1891) (Vandiemensland!); *Ost, Zeitschr. f. Oologie,* 1892, p. 34; *Gadow, Bronn's Thier-Reichs,* vi. 4, *Aves,* p. 104 (1893); *A. Newt. Dict. of B.* p. 213, with fig. p. 214 (pt. 1, 1893) (formerly in the islands of Bass Strait and Tasmania); *Schal. J. f. O.* 1894, p. 15 (syn. emend.).

Tachea novæ hollandiæ, *Flem. Phil. of Zool.* ii. p. 257 (1822).

Van Diemen's Land Cassowary, *Lath. Gen. Hist.* viii. p. 384, pl. 138 (1823).

Emeu, *Wedemeyer, Fror. Not.* ix. no. 177, pp. 7, 8 (1824) (muskulösen Beutel); *Cunningh. Fror. Not.* xviii. no. 387, p. 202 (1827); *Graells, Bull. Soc. Imp. Acclim.* 1861 (rearing, Retiro).

Dromaius novæ hollandiæ, *Knox, Edinb. Phil. Joarn.* x. pp. 132–137, 137–140 (anat. struct.) (1824); *id. Fror. Not.* Bd. vi. no. 127, pp. 263, 264 (trachea) (1824); *id. Meckel's Arch. f. Anat.* 1832, pp. 263–271, 271–273; *G. R. Gr. List Gen. B.* p. 63 (1840); *id. op. cit.* 2nd ed. p. 82 (1841); *Gulliv. P. Z. S.* 1842, p. 141 (blood-corpuscles); *G. R. Gr. Gen. B.* iii. p. 528 (part.) (1844); *id. List B. Brit. Mus.* iii. p. 54 (Van Diemen's Land) (1844); *Leichardt, Journal Overland Exp. in Austr.* p. 360 (1847); *Gould, B. Austr.* vi. pl. 1 (pt. 33, 1848); *Rchnb. Syn. Av.,* Gallinaceæ, t. 390. ff. 2206–13 (1848); *Sturt, Exped. Centr. Austr.* ii. Append. p. 47 (1849); *Rchnb. Syn. Av., Novitiæ,* t. 387. ff. 2694–99 (1851) (*ex Gould*); *Licht. Nomencl. Av.* p. 88 (1854); *Zucholdt, J. f. O.* 1859, p. 40; *Gould, Handb. B. Austr.* ii. p. 200 (1865); *Hartm. Zool. Gart.* 1866, p. 69; *G. R. Gr. Hand-list,* iii, p. 2, n. 9845 (1871); *Duchamp, Ann. Sc. Nat.* (5) xvii. art. 11, pp. 1–12, pl. 22 (anatomy) (1873); *Schleg. Mus. P.-B.,* Struthiones, p. 7 (1873); *Gulliv. P. Z. S.* 1875, p. 488 (blood-corpuscles); *Rams. P. Z. S.* 1876, p. 119 (N.E. Queensland); *id. Pr. Linn. Soc. N. S. W.* ii. p. 196, n. 557 (1878); *Masters, t. c.* p. 275 (Port Darwin!) (1878); *Rams. Tab. List,* p. 19, n. 569 (1888); *North, Descr. Cat. Nests & Eggs,* p. 292 (1889).

Dromiceius emu, *Steph. Gen. Zool.* xiv. 1, pl. 39 (1826).

Neuhollandischer Casuar, *Wagner in Heusinger's Zeitschr. f. organ. Phys.* i. pp. 595–596 (1827) (wing); *id. in Féruss. Bull. Sc. Nat.* xv. pp. 152, 153 (1828).

New Holland Ostrich, *Macartney, Rep. Brit. Assoc. Adv. Sc. 6th Meet.* 1836, *Transact. Sect.* p. 37 (1837) (organ of voice).

Dromiceus australis, *Sw. Class. B.* ii. p. 346 (1837); *Owen, P. Z. S.* 1846, p. 124 (index).

Emu, *Mitchell, Three Exped. into the Interr. of E. Austr.* ii. p. 280 (1838); *Bennett, Gather. of a Natural. in Austr.* p. 216 (1860); *Tegetmeier, Field,* 12th Sept., 1868.

Dromaius emeu, *Homey. J. f. O.* 1859, p. 365 (eggs).

Dromée de la Nouvelle Hollande, *Graells, Bull. Soc. Imp. Acclim.* 1861, pp. 91–94; *Touchard, op. cit.* 1867, pp. 2–7 (breeding).

Emeu de la Nouvelle Hollande, *Le Prestre, Bull. Soc. Imp. Acclim.* 1870, pp. 104–127 (breeding and rearing).

Casoar d'Australie, *Barrachin, Bull. Soc. Imp. Acclim.* 1880, pp. 238, 239.

Adult male. Feathers of the head and hind neck black, short, hairy, and recurved; naked skin of the sides of the head and throat blue; feathers of the body greyish, with the tips black; feathers of the legs grey, with small black spots at the tip; irides brown: bill and feet blackish. Total length about 78·74 inches, tarsus 13·38, culmen 2·44.

Female. Similar, but somewhat smaller.

Young. Darker than the adult.

Nestling. "Greyish white, with two stripes of black down the back, and two others on each side, each subdivided by a narrow middle line of white—these stripes being continued along the neck without subdivision, and broken into irregular spots on the head; two other broken stripes pass down the fore part of the neck and breast, and terminate in a broad band across the thighs" (*Gould*).

Hab. Eastern Australia, from Cape York, and perhaps also from Port Essington, to Victoria; formerly also Tasmania.

a. Ad. st.	Australia.	Rev. G. W. Keightley [P.].
b. Pull. sk.	Port Leschenault.	W. E. Bates, Esq. [P.].
c, *d.* Pull. st.		
e. Pull. st.	Bred in confinement.	Zool. Soc.
f. Pull. st.	Bred in confinement.	G. E. Loder, Esq. [P.].
g. Pull. st.	Bred in confinement.	Surrey Zool. Gard.
h–i. Ad. sk.	Tasmania.	Ronald Gunn, Esq. [P.].
k. Skeleton.		Lord Lilford [P.].
l. Skeleton.		

2. Dromæus ater.

Casoar de la Nouvelle Hollande (Casuarius novæ hollandiæ), *Péron* (*nec Lath.*), *Relat. du Voy. de découv. aux Terr. Austr.* i. p. 467 (1807); *id. op. cit.* 2nd ed. iii. p. 135 (1824).

Dromaius ater, *Vieill. N. D.* x. p. 212 (part.) (1817); *id. Gal. des Ois.* ii. p. 79, pl. 226 (1825); *G. R. Gr. Hand-list*, iii. p. 2, n. 9846 (1871); *A. Milne-Edw. & Oust. Notice sur quelques Espèces d'Ois. éteintes*, pp. 62-67, pl. v. (1893).

? Dromæus parvulus, "*Gould*," fide *Broderip, Penny Cyclop.* xxiii. p. 145 (1842).

Dromæus ater, *Bp. Compt. Rend.* xliii. p. 841, n. 5 (1856*); *Blyth, Ibis*, 1862, p. 93.

Adult (type). Similar to *D. novæ hollandiæ*, but much smaller, and with feathers of the neck entirely black; feathers of the body brown-fulvous, with the apical half very dark brown; feathers of the legs brown-fulvous mixed with blackish brown: bill and feet blackish; naked skin of the sides of the neck and throat apparently blue. Total length about 55 inches, tarsus 11·40, culmen 2·36 (*Mus. Paris*). Also the skeleton shows important specific characters.

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* Prince Bonaparte mentions (*l. c.*) zoological and anatomical characters distinguishing *D. ater* from *D. novæ hollandiæ*; *cf.* also *l. c.* p. 1026.

Hab. Decrès or Kangaroo Island, but now extinct, and only known from the single stuffed specimen and the skeleton in the Paris Museum.

3. Dromæus irroratus.

Dromæus irroratus, *Bartl. P. Z. S.* 1859, p. 295 (S. Australia); *id. Ann. & Mag. N. H.* (3) v. pp. 333–334 (1860); *id. P. Z. S.* 1860, p. 205 (egg); *Sclat. P. Z. S.* 1860, p. 211 (Albany, W. Australia), pp. 248, 249, 371; *id. Ann. & Mag. N. H.* (3) vi. pp. 212–215 (1860); *Ed. Ibis*, 1860, p. 310; *Sclat. Trans. Zool. Soc.* iv. p. 360, pl. 76 (1862); *Ed. Ibis*, 1863, p. 285; *Benn. Zoolog.* 1863, p. 8313, 1864, pp. 8323, 9200–9206; *id. Bull. Soc. Imp. Acclim.* 1868, pp. 682–688; *Gieb. Thes. Orn.* ii. p. 59 (1875); *Mosenth. & Harting, Ostriches & Ostrich Farm.* p. 145 (1877); *Gadow, Bronn's Thier-Reichs.* vi. 4, p. 104 (1893); *A. Newt. Dict. of B.* p. 214 (pt. 1, 1893); *Schal. J. f. O.* 1894, p. 16.

Dromaius irroratus, *Gould, Handb. B. Austr.* ii. p. 204 (1865); *G. R. Gr. Hand-list*, iii. p. 2, n. 9847; *Schleg. Mus. P.-B.*, Struthiones, p. 7 (1873); *Rams. Pr. Linn. Soc. N. S. W.* ii. p. 196, n. 558 (1878); *id. Tab. List*, p. 19, n. 570 (1888); *North, Descr. Cat. Nests & Eggs B. Austr.* p. 294 (1889).

Dromæus novæ hollandiæ, part., *Sclat. List Vert. An.* 8th ed. p. 555, specim. *d*, *e*, *n'*, *o'* (1883).

Similar to *D. novæ hollandiæ*, but is easily distinguished by its spotted plumage. The feathers are barred alternately with silky white and darkish grey throughout their length, terminating in a black tip margined posteriorly with rufous; those of *D. novæ hollandiæ* are uniform greyish from the base to the extremity, which is black. On comparing the two living birds together we find *D. irroratus* generally of a much more slender habit; the tarsi are longer and thinner, and the toes longer and much more slender; the tarsal scutes are smaller; the irides are of a pale hazel instead of a reddish brown as in *D. novæ hollandiæ*. (*Sclater.*) Naked skin round the ears and of the throat blue.

Immature birds are decidedly darker than those of *D. novæ hollandiæ*.

Hab. Western Australia.

a. Ad. sk. (incomplete).	Australia.	Mrs. MacCallum [P.]. (Type of species.)
b. Juv. sk.	Richmond, Interior of Australia.	

Family II. CASUARIIDÆ.

Bill long, compressed, with the culmen curved to the tip, which overlaps that of the under mandible; the nostrils placed in the middle of the bill, and in a broad membranous groove, with the opening anteriorly and suboval. The head and base of culmen ornamented with an elevated helmet; the head and neck denuded of feathers, the naked skin brightly coloured; the neck wattled. The wings rudimentary, with five strong rounded shafts without webs. Tail not apparent. Tarsi long, robust, and covered with large hexagonal scutes, except near the toes, where the scutes are transverse. Toes long, the lateral ones shorter than the middle one, the outer the longest, and the inner armed with a very long powerful claw, nearly straight and acuminate; the other claws moderate, curved, and obtuse.

1. CASUARIUS.

	Type.
Casuarius, *Briss. Orn.* v. p. 10 (1760); *Lath. Ind. Orn.* ii. p. 664 (1790)	C. galeatus.
Rhea, *Lacép.* (*nec Lath.*) *Mém. de l'Inst.* iii. p. 519 (1800–1) (=Casuarius).	
Hippalectryo, *Gloger, Hand- u. Hilfsb.* pp. xxxxiii, 452 (1842)	C. galeatus.

Range. Papuan Subregion, with Northern Australia.

[*Cf.* Salvadori, T., Monografia del genere *Casuarius*, Briss. (Mem. R. Ac. Sc. Tor. (2) xxxiv. pp. 173–217, tt. i., ii. 1882).]

Key to the Species.

a. Casque compressed on the sides.
- *a'.* Three wattles on the throat—one median, small, lower down; two on the sides, longer and higher up ..... *tricarunculatus*, p. 591.
- *b'.* Only two wattles on the throat.
  - *a''.* Wattles quite far apart on the sides of the throat ..... *bicarunculatus*, p. 591.
  - *b''.* Wattles not far apart, but approached one to the other.
    - *a'''.* Smaller: the casque not very high, thicker above; nail of the inner toe shorter ..... *galeatus*, p. 592.
    - *b'''.* Larger: the casque very high, thinner above; nail of the inner toe longer; wattles very large .... *australis*, p. 594. / *salvadorii*, p. 595.
  - *c''.* Wattles joined together at the base, or, rather, one long wattle on the throat more or less deeply divided at the tip ..... *beccarii*, p. 596.

b. Casque with the hind surface flat, rather broad and inclined forward.
c'. A single pear-shaped wattle on the middle of the fore neck, which with the lower part of the neck is yellow.
d''. Wattle larger; head and upper part of the neck blue ..... *uniappendiculatus*, [p. 597.
e''. Wattle smaller; head and upper part of the neck blue, but on the occiput a broad yellow patch ..... *occipitalis*, p. 598.
d'. No wattles whatever on the fore neck.
f''. Head and neck varied with different colours.
c'''. Throat blue; lower part of the hind neck orange-red ..... *papuanus*, p. 599.
d'''. Throat red; nape blue ..... *picticollis*, p. 600.
g''. Head and neck nearly uniform blue .. *bennetti*, p. 601.

1. Casuarius tricarunculatus.

Casuarius tricarunculatus, *Becc. Ann. Mus. Civ. Gen.* vii. p. 717 (Warbusi) (1875); *Sclat. Ibis*, 1876, p. 245; *id. P. Z. S.* 1878, p. 214; *Meger, J. f. O.* 1878, p. 204; *Salvad. Ann. Mus. Civ. Gen.* xii. p. 419 (*nec* p. 420) (1878); *Sclat. Ibis*, 1879, p. 96; *Salvad. Ibis*, 1879, p. 105 (part.); *id. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 184 (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 413, n. 1 (1882); *id. Orn. Pap. e Mol.* iii. p. 473 (1882).

The type of this species was a live young bird, bought by Dr. Beccari at Monni, near Warbusi, on the west coast of Geelvink Bay. The bird is apparently lost, and described as being similar to *C. galeatus*, but provided with three caruncles—two larger higher up, and one smaller, median, lower down on the middle of the neck.

Hab. West coast of Geelvink Bay, near Warbusi.

2. Casuarius bicarunculatus.

Casuarius bicarunculatus, *Sclat. P. Z. S.* 1860, pp. 211, 248, 249, f. *b* (juv. ex patria ignota); *id. Ibis*, 1860, p. 310; *id. Ann. & Mag. N. H.* (3) vi. p. 114 (note), p. 145 (1860); *id. Ibis*, 1861, p. 312; *id. Trans. Z. S.* iv. p. 358, f. *b*, p. 364 (note), pl. lxxiii. (1862); *Crisp, P. Z. S.* 1862, p. 137 (gall-bladder); *Schleg. Jaarb. zool. Genootsch. Nat. Art. Mag.* 1862, p. 198; *id. Dierent., Vogels*, p. 239 (1864); *Finsch, Neu-Guin.* p. 180 (1865); *Sclat. P. Z. S.* 1866, p. 168; *F. Schleg. Zool. Gart.* 1866, p. 178; *Schleg. N. T. D.* iii. pp. 250, 347 (1866); *id. in Rosenb. Reis naar Zuidoostereil.* p. 52 (note) (1867); *Sclat. P. Z. S.* 1869, p. 149; *G. R. Gr. Hand-list*, iii. p. 2, sp. 9849 (1871); *Gieb. Thes. Orn.* i. p. 595 (1872); *Sclat. P. Z. S.* 1872, pp. 150, 495, pl. xxvi.; *Garrod, P. Z. S.* 1873, p. 470 (both carotids), p. 644 (muscles); *Sclat. P. Z. S.* 1873, p. 519; *Schleg. Mus. P.-B.*, Struthiones, p. 10 (1873); *Rosenb. J. f. O.* 1873, p. 320; *id. Reist. naar Geelvinkb.* p. 117 (1875); *Sclat. P. Z. S.* 1875, p. 87; *id. Guide to the Gard. of the Z. S. L.* p. 57 (1877); *Harting, Ostriches & Ostr. Farm.* p. 110 (1877); *Salvad. Ann. Mus. Civ. Gen.* xii. p. 316 (ad. in Brem. Mus.) (1878); *Meyer, J. f. O.* 1878, p. 203; *id. Ibis*, 1879, p. 96; *Rosenb. Mal. Archip.* p. 373 (1878-79); *Sclat. List Vert. An. Z. S. L.* 7th ed.

p. 472 (1879); *Gould, B. New Guin.* v. pl. 73 (pt. xii., 1881); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 185, t. i. f. 1 (head) (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 2 (1882); *id. Orn. Pap. e Mol.* iii. p. 475 (1882); *Sclat. List Vert. An.* 8th ed. p. 549 (1883); *Schal. J. f. O.* 1894, p. 19.

? Casuarius galeatus, *Wall.* (*nec Vieill.*) *Ann. & Mag. N. H.* xx. p. 477 (1857).

? Casuarius emeu, *G. R. Gr.* (*nec Lath.*) *P. Z. S.* 1858, p. 187 (sternum), p. 196 (part.); *id. Cat. B. New Guin.* pp. 50, 61 (part.) (1859); *Finsch, Neu-Guin.* p. 180 (part.) (1865).

? Casuarius kaupi, *G. R. Gr.* (*nec Rosenberg, neque Sclater*), *P. Z. S.* 1861, p. 438; *Rosenb. N. T. N. I.* xxv. p. 252 (*nec* p. 251) (1863); *id. J. f. O.* 1864, p. 135 (*nec* p. 134).

Casuarius aruensis, *Schleg. N. T. D.* iii. p. 347 (1866).

Casuarius galeatus, *Rosenb.* (*nec Vieill.*) *Reis naar Zuidoostereil.* p. 52 (1867).

? Casuarius sp., *Meyer, Zeitschr. d. ges. Orn.* i. p. 296 (egg from Aru Isl.) (1884); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xlii. p. 213 (1891).

Adult. Feathers of the body blackish; casque compressed on the sides, not very high, with the base narrow; head greenish blue; neck blue; lower part of the nape vermilion; caruncles far apart on the sides of the neck, long, and purple-red.

Young. Feathers of the body brownish; naked skin of the head and neck bluish grey; caruncles brick-red.

Hab. Wammer and Kobroor, N. Aru Islands.

a. Imm. st.		Zoological Society.
b. Imm. st.		Zoological Society. (Type of species.)
c. Skeleton.		
d. Imperfect skeleton of spec. *a*.		
e. Bones of spec. *b*.		
f. Sternum.	Aru Islands.	A. R. Wallace, Esq. [C.].

3. Casuarius galeatus.

Casuarius, *Olear. Mus.* 23, t. 13. f. 2; *Alb. Av.* 2. p. 56, t. 60; *Frisch, Av.* t. 105; *Briss. Orn.* v. p. 10, pl. 1. f. 2 (1760).

Cela, *Moehr. Av. Gen.* 56.

Emeu, *Dodart, Mém.* 377; *Ray, Av.* 36; *Clus. Exot.* 97, t. 98; *Bont. Jav.* 71; *Willughby, Orn.* 105, t. 25; *Jonst. Av.* 172, t. 56; *Aldrov. Orn.* iii. p. 541, t. 541.

Struthio casuarius, *Linn. S. N.* i. p. 265, n. 2 (1766); *Gm. S. N.* i. p. 126, n. 2 (1788).

Casoar, *Perr. & Duvern. Mem. Ac. Sc. depuis* 1666–1699, iii. 2, p. 155, pls. 56, 57; *Buff. Hist. Nat. Ois.* i. p. 464 (1770).

Casoar des Indes orientales, *D'Aubent. Pl. Enl.* 313.

Galeated Cassowary, *Lath. Syn.* iii. 1, p. 10, n. 1, pl. 72 (1785).

Casuarius emeu, *Lath. Ind. Orn.* ii. p. 664, n. 1 (1790); *Dum. Dict. Sc. Nat.* vii. p. 199 (Ceram) (1817); *Less. Man. d'Orn.* ii. p. 209 (part., excl. Nova Guinea) (1828); *id. Voy. Coq., Zool.* i. pt. 2, p. 711 (part.) (1828); *id. Tr. d'Orn.* p. 7, pl. 2. f. 1 (1831) (part., Ceram, Bouru); *Temm. Pl. Col.* i. *Tabl. Méth.* p. 88 (1838); *G. R. Gr. Gen. B.* iii. p. 528 (part.) (1844); *id. List B. Brit. Mus.* iii.

p. 54 (1844); *Thienem. Fortpflanz. ges. Vögel*, p. 2, t. i. f. 1 (1845); *Gullv. P. Z. S.* 1848, p. 37 (blood-corpuscles); *Bp. Compt. Rend.* xliii. p. 841, n. 6 (1856); *G. R. Gr. P. Z. S.* 1860, p. 362; *Finsch, Neu-Guin.* p. 180 (part.) (1865); *G. R. Gr. Hand-list*, iii. p. 2, n. 9848 (1871); *Schleg. Mus. P.-B.*, Struthiones, p. 9 (1873); *Gullv. P. Z. S.* 1875, p. 488.

Casuarius galeatus, *Bonn. Enc. Méth.* i. p. 4, pl. 4. f. 2 (1790); *Vieill. N. D.* v. p. 345, pl. B 11. f. 1 (1816); *Merrem, Abh. Berl. Ak.* 1819, p. 179; *Steph. Gen. Zool.* xiv. 2, p. 432, pl. 29 (1819); *Ranz. Elem. di Zool.* iii. pt. 1, p. 97 (1821); *Vieill. Gal. des Ois.* ii. p. 77, pl. 225 (1825); *Merrem in Ersch u. Gruber's Encycl.* xv. p. 348 (1826); *Altum, J. f. O.* 1854, p. xxvi; *Gould, P. Z. S.* 1857, p. 269; *Benn. t. c.* p. 720; *Homey. J. f. O.* 1859, p. 365; *Sclat. Ibis*, 1859, p. 115; *id. P. Z. S.* 1860, pp. 210, 250; *Blyth, Ibis*, 1860, p. 307; *Sclat. t. c.* p. 310; *id. Ann. & Mag. N. H.* (3) vi. p. 145 (1860); *Des Murs, Tr. d'Oologie*, p. 362 (1860); *Rosenb. J. f. O.* 1861, p. 45; *Blyth, Ibis*, 1862, p. 78; *Crisp, P. Z. S.* 1862, p. 137; *Sclat. Trans. Z. S.* iv. p. 358, f. *a*, and p. 360 (note), pl. 71 (1862); *Schleg. Jaarb. zool. Genotsch. Nat. Art. Mag.* 1862, p. 196; *Sclat. P. Z. S.* 1863, p. 234; *Schleg. Dierent., Vogels*, p. 238 (1864); *Sclat. P. Z. S.* 1866, p. 168; *F. Schleg. Zool. Gart.* 1866, p. 177; *Sclat. P. Z. S.* 1867, p. 179; *Müller, t. c.* p. 252; *Krefft, t. c.* p. 483; *Sclat. P. Z. S.* 1868, p. 376, 1869, p. 628; *Wall. Malay Archip.* ii. p. 156 (1869); *Flower, P. Z. S.* 1871, pp. 32, 33, 34, 35; *Sclat. P. Z. S.* 1872, pp. 150, 495; *Gieb. Thes. Orn.* i. p. 595 (1872); *Garrod, P. Z. S.* 1873, p. 644; *Rosenb. J. f. O.* 1873, p. 390; *Nathus. J. f. O.* 1874, p. 10; *Sclat. P. Z. S.* 1875, pp. 86, 87; *Harting, Ostriches & Ostr. Farm.* p. 103, with pl. (1877); *Sclat. P. Z. S.* 1878, pp. 80, 214; *Meyer, J. f. O.* 1878, p. 202; *Nathus. J. f. O.* 1879, p. 346; *id. Ibis*, 1879, p. 96; *Pelz. t. c.* p. 376; *Rosenb. Malay. Archip.* p. 323 (1879); *Sclat. List Vert. An.* p. 472 (1879); *id. P. Z. S.* 1880, p. 315; *id. Voy. Challeng., Birds*, p. 64 (1881); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 188, tav. i. f. 2 (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 3 (1882); *Pelz. Ibis*, 1882, p. 608; *Salvad. Orn. Pap. e Mol.* iii. p. 479 (1882); *Sclat. List Vert. An.* 8th ed. p. 548 (1883); *Thebault, Bull. Soc. Philom.* (8) iii. pp. 198–210 (1891); *Evans, Ibis*, 1891, p. 84; *Sharpe, Cat. Osteol. Spec. B. C. S.* iii. p. 439 (1891); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xlii. p. 213 (1891); *Schal. Zeitschr. f. Oologie*, 1892, p. 11; *Ost, ibid.* pp. 15, 34; *Schal. J. f. O.* 1894, p. 18.

Casuarius casuarius, *Illig. Prodr. Mam. et Av.* p. 247 (1811).

Hippalectryo indicus, *Gloger, Hand- u. Hilfsb.* p. 452 (1842).

Casuarius orientalis, *S. Müll. Verh. Land- en Volkenk.* p. 109 (part., Ceram only) (1839–44); *Hartl. J. f. O.* 1854, p. 257.

Javanese (!) Cassowary, *Gullv. P. Z. S.* 1846, p. 26.

Hippalectryo casuarius, *Sundev. Meth. nat. Av. disp. Tent.* p. 152 (1872); *Heine u. Rehnw. Nomencl. Mus. Hein. Orn.* p. 305 (Ceram) (1890).

Casuarius javanensis (!), *Gullv. P. Z. S.* 1875, pp. 478, 488.

Casuarius beccarii, *Pelz.* (*nec Sclat.*) *Ibis*, 1879, pp. 376, 377; *id. Ibis*, 1881, p. 401 (egg).

Adult. Of medium size. Feathers of the body black; casque compressed on the sides, rather high, with the upper edge rather thick, the posterior edge almost perpendicular, much shorter than

the anterior one; head pale greenish blue; neck purple-blue, red on the hind part; naked surface on each side of the neck purple-red, edged with blue anteriorly; caruncles close together, flesh-colour. Total length about 60 inches, bill from gape 4·91, tarsus 10·22, nail of inner toe 3·14.

Young. Feathers of the body brown; head and neck covered with short feathers; casque very low; caruncles very short; skin of head and neck blue, of hind neck ochreous yellow.

Hab. Ceram.

a. Ad. st.	Purchased.
b. Imm. st.	Purchased.
c. Juv. st.	Zool. Soc.
d. Juv. st.	Lidth de Jeude Coll.
e. Skeleton.	Purchased.
f. Imperfect skeleton.	Purchased.
g. Sternum of spec. *c*.	Zool. Soc.

4. Casuarius australis.

Casuarius australis, *Wall, Illustr. Sydn. Herald*, 1854, 3rd June; *Gould, P. Z. S.* 1857, pp. 269, 270; *G. R. Gr. P. Z. S.* 1858, p. 196; *id. Cat. B. New Guin.* p. 61 (1859); *Sclat. P. Z. S.* 1860, p. 210; *id. Ibis*, 1860, p. 310; *id. Tr. Zool. Soc.* iv. p. 360 (1862); *Schleg. Jaarb. zool. Genotsch. Nat. Art. Mag.* 1862, p. 200; *Gould, Handb. B. Austr.* ii. p. 206 (1865); *F. Schleg. Zool. Gart.* 1866, p. 180; *Sclat. P. Z. S.* 1866, pp. 168, 557, & 1867, p. 242; *Benn. P. Z. S.* 1867, p. 473; *Sclat. P. Z. S.* 1868, p. 376; *id. Ibis*, 1868, p. 348; *Rams. P. Z. S.* 1868, pp. 381, 388; *Gould, B. Austr., Suppl.* pls. 70, 71 (pt. i., 1869); *Krefft, Ibis*, 1869, p. 348; *Ibis*, 1870, pp. 119, 120; *G. R. Gr. Hand-list*, iii. p. 2, n. 9851 (1871); *Flower, P. Z. S.* 1871, p. 32 and foll. (skeleton); *Sclat. P. Z. S.* 1871, p. 547 (a specimen in confinement); *Gieb. Thes. Orn.* i. p. 594 (1871); *Schleg. Mus. P.-B.*, Struthiones, p. 9 (1873); *Rams. P. Z. S.* 1874, p. 325; *Sclat. P. Z. S.* 1875, pp. 2, 82, 85, 86, 87; *id. Nature*, xii. p. 516 (1875); *Sorby, P. Z. S.* 1875, p. 362; *Sclat. P. Z. S.* 1875, p. 469 (a second specimen in confinement), & p. 527; *Rams. P. Z. S.* 1876, p. 119 & foll.; *Sclat. P. Z. S.* 1876, p. 414; *Rams. Pr. Linn. Soc. N. S. W.* i. p. 186 (1876), ii. p. 196, n. 559, & p. 376, pl. xi. (head) (1877); *Krefft, P. Z. S.* 1877, p. 28 (specimen in confinement); *Harting, Ostriches and Ostr. Farm.* p. 95 (1877); *Ibis*, 1877, p. 237; *Sclat. P. Z. S.* 1878, p. 214; *Meyer, J. f. O.* 1878, p. 203; *Ibis*, 1879, p. 96; *Sclat. List Vert. An.* 7th ed. p. 472 (1879); *Ibis*, 1881, p. 500; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 192, tav. i. f. 3 (head) (1881); *id. Orn. Pap. e Mol.* iii. p. 473 (1882); *Sclat. List Vert. An.* 8th ed. p. 548 (1883); *Rams. Tab. List Austr. B.* p. 19, n. 571 (Cape York, Rockingham Bay) (1888); *Lumholtz, Among Cannibals*, pp. 98, 99 (1889); *North, Nests and Eggs B. Austr.* p. 294, pl. xv. (egg) (1890); *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 439 (1891); *Schal. Zeitschr. f. Oologie*, 1892, p. 11; *id. J. f. O.* 1894, p. 24.

Casuarius johnsonii, *F. Muell. Australasian*, Dec. 15th, 1866; *id. P. Z. S.* 1867, p. 242; *Benn. & Carron, ibid.* pp. 473, 474; *Krefft, ibid.* p. 483; *Diggles, Orn. of Austr.* pts. xii., xiii.; *Ibis*, 1868, p. 348; *Krefft, Ibis*, 1869, p. 348; *Newt. Ibis*, 1870, p. 120.

Casuaris regalis (*errore*), *Rosenb. J. f. O.* 1873, p. 390.

Similar to *C. galeatus*, but larger. Feathers of the body black; casque brown-black, compressed on the sides, very high, with the upper margin thin, the posterior margin sometimes scarcely shorter than the anterior one; naked skin of head pale greenish blue; fore neck deep blue, lower hind neck red; caruncles close together, very large, red.

Young. Feathers of the body brown; on the forehead only a frontal horny shield; naked skin on the sides of the neck blue; caruncles small (*Ramsay*).

Hab. N.E. Australia, from Cape York to Rockingham Bay.

a. ♂? ad. st.	Rockingham Bay, N.E. Australia.	P. L. Sclater, Esq. [P.].
b. ♀? ad. st.	Queensland.	Marquis of Normanby [P.].
c–e. Juv. et pull. sk.	Queensland.	Salvin-Godman Coll.

5. Casuarius salvadorii.

Casuarius altijugus, *Sclat. Nature*, xvii. p. 375 (Wandammen) (1878)*; *Salvad. Ann. Mus. Civ. Gen.* xii. pp. 420, 421, 422 (1878); *Edd. Ibis*, 1878, p. 481; *Salvad. Ibis*, 1879, p. 105.

Casuarius salvadorii, *Oust. Assoc. Sc. de France, Bull.* no. 539, p. 350 (23rd Febr., 1878); *Sclat. P. Z. S.* 1878, pp. 213, 214, fig. p. 213; *Meyer, J. f. O.* 1878, pp. 202, 203; *Salvad. Ann. Mus. Civ. Gen.* xii. pp. 420, 421, 422 (1878); *Edd. Ibis*, 1878, p. 481, 1879, p. 96; *Salvad. Ibis*, 1879, p. 105; *Pelz. Ibis*, 1879, p. 377; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 204 (note) tav. i. f. 5 (1881); *id. Orn. Pap. e Mol.* iii. p. 488 (note) (1882).

Casuarius tricarunculatus, part., *Salvad. Ann. Mus. Civ. Gen.* xii. p. 420 (1878); *Edd. Ibis*, 1878, p. 481.

A species not very well known. The type in the Paris Museum is not fully adult; the plumage is partly brown; the casque is low, and shows no characteristic form; the caruncles are quite separated from the origin, and are somewhat distant one from the other, perhaps by the distension of the skin. Dr. Oustalet, however, in the original description, says:—"La caroncle de la gorge est fortement bifide, comme dans le *C. beccarii*," which is not quite exact.

The type of *Casuarius altijugus* appears to be fully adult: has the casque very high, with both the anterior and posterior edges very thick; the wattles are two, on each side of the median line, closely approximating at their base, but divided down nearly to their origin, and about 3 inches in length. Whole length about 5 feet, tarsus 12·5 inches, middle toe 8·5, bill from gape 7·5.

Nothing is known about the colours of the naked skin of the head and neck.

This species comes nearest to *C. galeatus* and *C. australis*.

* This name was withdrawn by the author in favour of the one used by Dr. Oustalet.

Hab. Western coast of Geelvink Bay, near the southern extremity.

a. Ad. st. Wandammen, Geelvink Bay, May 1876. L. Laglaize [C.]. (Type of *Casuarius altijugus*, Sclat.)

6. Casuarius beccarii.

? Casuarius, sp., *S. Müll. Verh. Land- en Volkenk.* p. 22 (Utanata, Princess Marianne Strait) (1839–44).

? Casuarius orientalis, *S. Müll. op. cit.* p. 109 (part., ex Nova Guinea) (1839–44).

Casuarius beccarii, *Sclat. P. Z. S.* 1875, p. 87, ff. 1, 2 in p. 86 (Vokan, Aru I.), p. 527, pl. lviii. (S. New Guinea), and p. 533; *id. Nature*, xii. p. 516 (1875); *Salvad. Ann. Mus. Civ. Gen.* vii. p. 717 (note) (1875); *Sclat. P. Z. S.* 1876, p. 414 (live specim.); *Harting, Ostriches & Ostr. Farm.* p. 107 (1877): *Forbes, P. Z. S.* 1877, pp. 307, 316 (cloaca and bursa Fabricii); *Sharpe, Ibis*, 1877, p. 325; *Sclat. & Salv. Ibis*, 1877, p. 372 (note); *Oust. Assoc. Sc. de France, Bull.* no. 539, p. 350 (1878); *Meyer, J. f. O.* 1878, pp. 202, 300; *Salvad. Ann. Mus. Civ. Gen.* xii. pp. 421, 422 (1878); *Sclat. P. Z. S.* 1878, p. 214; *Sclat. & Salv. Ibis*, 1878, p. 481, 1879, p. 96; *D'Alb. & Salvad. Ann. Mus. Civ. Gen.* xiv. pp. 136–145, ff. pp. 137, 139, 140, 141, 142, 143 (1879); *Ed. Ibis*, 1879, p. 482; *Sclat. List Vert. An.* p. 472 (1879); *D'Alb. Nuova Guin.* pp. 494, 588 (1880); *Sharpe, Ibis*, 1881, p. 500; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 197, tav. i. f. 5 (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 4 (1882); *id. Orn. Pap. e Mol.* iii. p. 484 (1882); *Sclat. List Vert. An.* 8th ed. p. 549 (1883); *Schal. J. f. O.* 1894, p. 21.

Casuarius bicaruculatus, *Becc.* (*nec Sclat.*) *Ann. Mus. Civ. Gen.* vii. p. 717 (1875).

Casuarius australis, *D'Alb.* (*nec Wall*) *Sydn. Mail*, 1877, p. 143; *id. Ann. Mus. Civ. Gen.* x. p. 19 (1877); *id. Ibis*, 1877, p. 372.

Casuarius sclaterii, *Salvad. Ann. Mus. Civ. Gen.* xii. p. 422 (19th July, 1878); *Ibis*, 1878, p. 481; *Meyer, J. f. O.* 1878, p. 300; *Sharpe, Ibis*, 1879, p. 116 (type in the Brit. Mus.).

? Casuarius galeatus, *Sclat. Zool. Voy. 'Challenger,' Birds*, p. 64 (1881).

? Casuarius, sp., *Meyer, Zeitschr. d. ges. Orn.* i. p. 296 (egg from Aru Isl.) (1884); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xlii. p. 213 (1891).

Adult. Feathers of the body black; casque compressed, thick on the anterior and posterior edges, thinner on the middle, very high, and with the upper edge rather thin; the posterior edge usually inclined backwards, sometimes almost perpendicular, shorter than the anterior edge: head grey-blue, a band from the base of the lower mandible yellow, changing into red posteriorly; throat and sides of the neck blue; nape red on the upper part, changing into orange lower down, naked area on the lower part of the sides of the neck flesh-colour; on the anterior part of the neck a very long caruncle, more or less divided into two at the tip, and of a flesh-colour. Total length about 63 inches, bill from gape 5·50, tarsus 11, nail of the inner toe 3·07.

Young. Feathers reddish brown; casque scarcely prominent; caruncle small, with the two lobes divided nearly to the base. (*Mus. Genoa.*)

Hab. Vokan, Aru Islands, and S. New Guinea along the Fly River.

a, b. Imm. st.	Aru Islands *.	'Challenger' Exped.
c. Imm. st.	S.E. New Guinea. (Died 2nd Febr., 1879.)	Zool. Soc.
d. Ad. sk.	Port Moresby, S.E. New Guinea.	A. Goldie [C.].
e. Imm. sk.	Fly River.	Purchased.
f. ♀ imm. sk.	Coast of S.E. New Guinea opposite Cornwallis Isl. (Died 9th Dec., 1876.)	Zool. Soc. (Type of *Casuarius sclateri*, Salvad.)
g. Skeleton of specimen *f*.		

7. Casuarius uniappendiculatus.

Casuarius, n. sp., *Blyth*, *Ibis*, 1860, p. 193; *Sclat. P. Z. S.* 1860, p. 210; *id. Ann. & Mag. Nat. Hist.* (3) vi. p. 145 (1860).

Casuarius uniappendiculatus, *Blyth*, *J. A. S. B.* xxix. p. 112 (juv.) (1860); *id. Ann. & Mag. Nat. Hist.* (3) vi. p. 113 (1860); *Sclat. ibid.* (note); *Blyth*, *Ibis*, 1860, p. 307; *Sclat. t. c.* p. 310; *Bennett*, *t. c.* p. 403, pl. 14 (juv.); *Sclat. ibid.* et p. 420, 1861, p. 312; *Blyth*, *J. A. S. B.* xxx. p. 185 (1861); *Ibis*, 1862, p. 78; *Sclat. Trans. Zool. Soc.* iv. p. 359, pl. 74 (juv.) (1862); *Schleg. Jaarb. zool. Genotsch. Nat. Art. Mag.* 1862, p. 198, pl.; *id. Dierent., Vogels*, p. 239, f. p. 240, et tabula; *Sclat. P. Z. S.* 1863, p. 225; *Finsch*, *Neu-Guin.* p. 180 (1865); *Sclat. P. Z. S.* 1866, pp. 34, 168; *F. Schleg. Zool. Gart.* 1866, p. 179; *Schleg. Ned. Tijdschr. Dierk.* iii. pp. 250, 347 (1866); *id. in Rosenb. Reis naar Zuidoostereil*, p. 52 (note) (1867); *Gould*, *Suppl. B. Austr.* pls. 74, 75 (1869); *Newt. Ibis*, 1870, pp. 119, 120; *Schleg. Ned. Tijdschr. Dierk.* iv. p. 53 (1871); *G. R. Gr. Hand-list*, iii. p. 2, n. 9852 (1871); *Gieb. Thes. Orn.* i. p. 595 (1872); *Sclat. P. Z. S.* 1872, pp. 147, 149, 150; *Schleg. Mus. P.-B.*, Struthiones, p. 10 (1873); *Rosenb. Journ. f. Orn.* 1873, p. 390; *Meyer*, *Sitzb. k. Ak. Wissensch. zu Wien*, lxix. p. 218 (1874); *Sclat. Ibis*, 1874, p. 417; *id. P. Z. S.* 1874, pp. 247, 495; *id. P. Z. S.* 1875, p. 85, pl. xx. ff. 1, 2 (juv.). pp. 87, 533; *Rosenb. Reist. naar Geelvinkb.* pp. 17, 69, 117 (1875); *Becc. Ann. Mus. Civ. Gen.* vii. p. 717 (1875); *Salvad. ibid.* p. 719 (1875); *Sclat. Ibis*, 1876, p. 244; *id. P. Z. S.* 1876, pp. 244, 414 (specim. alive); *Forbes*, *P. Z. S.* 1877, pp. 307, 313, 314, 316 (bursa Fabricii); *Sclat. P. Z. S.* 1877, p. 419 (specim. alive in Amsterdam); *Harting*, *Ostriches & Ostr. Farm.* p. 112 (1877); *Oust. P. Z. S.* 1878, pp. 389, 390; *Salvad. Ann. Mus. Civ. Gen.* xii. p. 346 (Sorong), p. 424 (1878); *Ibis*, 1878, p. 482; *Meyer*, *Journ. f. Orn.* 1878, p. 203; *Rosenb. Malay. Archip.* p. 396 (cum fig. capitis), pp. 481, 563 (1878-79); *Ibis*, 1879, p. 96; *Oudot*, *Ferm. d. Autr.* p. 237 (1880); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 205, tav. ii.

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* Sclater mentions these birds as having been procured alive at Ternate.

f. 6 (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 5 (1882); *id. Orn. Pap. e Mol.* iii. p. 490 (1882); *Sclat. List Vert. An.* 8th ed. p. 549 (1883); *Bedd. P. Z. S.* 1886, pp. 145, 146 (air-sacs); *Meyer, Abh. Mus. Dresd.* no. 3, taf. 2 (egg) (1893); *Schal. J. f. O.* 1894, p. 23 (egg).

Casuarius kaupi, *Rosenb. Natuurk. Tijdschr. Nederl. Ind.* xxiii. p. 43, tab. (1861); *id. Journ. f. Orn.* 1861, p. 44, taf. i.; *Sclat. Ibis*, 1861, p. 312; *id. Trans. Zool. Soc.* iv. p. 360 (note) (1862); *Schleg. Jaarb. zool. Genotsch. Nat. Art. Mag.* 1862, p. 199; *Rosenb. Natuurk. Tijdschr. Ned. Ind.* xxv. p. 251, n. 246 (1863); *id. Journ. f. Orn.* 1864, p. 136, n. 246; *Finsch, Neu-Guinea*, p. 181 (1865); *Sclat. P. Z. S.* 1866, p. 168; *F. Schleg. Zool. Gart.* 1866, p. 180; *Rosenb. Reis naar Zuidoostereil*, p. 52 (1867); *Newton, Ibis*, 1870, p. 120; *Schleg. Mus. P.-B.*, Struthiones, p. 12 (1873); *Rosenb. Journ. f. Orn.* 1873, p. 370; *id. Malay. Archip.* p. 563 (1878).

Casuarius, sp., *Salvad. Ann. Mus. Civ. Gen.* x. p. 167, sp. 180 (Sorong, juv.) (1877).

Adult. Feathers of the body black; casque dark olive, of the shape of a triangular pyramid, with the posterior surface nearly oval; head, throat, and hind neck blue; lower part of the neck, with the single, pear-shaped caruncle, yellow; naked skin on the lower part of the sides of the neck flesh-colour, surrounded with yellow. Total length about 65 inches, bill from gape 5·22, tarsus 11, nail of inner toe 3·30.

Young. Pale fulvous, with longitudinal brown bands on the upper parts and on the thighs.

Hab. Salwatti and the opposite coast of N.W. New Guinea.

a. Cast of the head of the type of *Casuarius kaupi*, Rosenb.	Salwatti.	Darmstadt Mus.
b. Imm. st.	Salwatti.	L. Laglaize [C.].
c. Imm. st.	Western New Guinea.	Zool. Soc.
d. Skeleton (imperfect) of specimen *c*.		

8. Casuarius occipitalis.

? Casuarius papuanus, part., *Rosenb. Reist. naar Geelvinkb.* p. 117 (Jobi) (1875); *id. Malay. Archip.* p. 563 (part.) (1875).

Casoar di Jobi, *Beccari, Ann. Mus. Civ. Gen.* vii. p. 718 (1875).

Casuarius occipitalis, *Salvad. t. c.* (note) (1875); *Sclat. Ibis*, 1876, p. 245 (note); *Salvad. Ann. Mus. Civ. Gen.* xii. p. 423 (1878); *Ibis*, 1878, p. 482; *Meyer, J. f. O.* 1878, pp. 203, 300 (note); *Ibis*, 1879, p. 96; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 209, tav. ii. f. 7 (head) (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 6 (1882); *id. Orn. Pap. e Mol.* iii. p. 494 (1882); *Meyer, Abh. Mus. Dresd.* no. 3, p. 29, taf. 2. f. 4 (egg) (1893); *Schal. J. f. O.* 1894, p. 22.

Casuarius westermanni, *Rey* (*nec Sclat.*), *Zeitschr. f. Ool.* 1892, p. 19.

Casuarius laglaizii, *Oust. Bull. Soc. Philom.* (8) v. pp. 1–3 (juv., Jobi, (1893).

Very similar to *C. uniappendiculatus*, but differs in having a triangular yellow patch on the occiput, the posterior surface of the casque narrower, the single caruncle smaller. The casque is pale olive; bill and feet dark olive. Total length 65 inches, bill from gape 5·37, tarsus 11, nail of inner toe 2·75. (Type, *Mus. Genoa.*)

A very old bird in the Paris Museum differs from the type in having the casque much higher, with the posterior part basally narrow, and broadened into a flat surface towards the tip; the anterior edge is decidedly more convex.

I have examined, in the Paris Museum, the type of *C. laglaizii*, which, in my opinion, is a small specimen of the present species.

Hab. Jobi.

a. Juv. st.	Ansus, Jobi.	L. Laglaize [C.].
b. Pull. sk.	Ansus, Febr.	L. Laglaize [C.].
c. Pull. st.	Jobi.	L. Laglaize [C.].

9. Casuarius papuanus.

? Casuarius emeu, part., *Less. Voy. Coq.* i. pt. 2, p. 717 (New Guinea) (1828); *id. Man. d'Orn.* ii. p. 209 (part.) (1828); *id. Tr. d'Orn.* p. 7 (part.) (1831); *Sclat. Journ. Linn. Soc.* ii. p. 168, sp. 152 (1858); *G. R. Gr. P. Z. S.* 1858, p. 196 (part.); *id. Cat. B. New Guin.* pp. 50, 61 (part.) (1859); *id. P. Z. S.* 1861, p. 438; *Finsch, Neu-Guin.* p. 180 (part.) (1865).

? Casuarius orientalis, *S. Müll. Verh. Land- en Volkenk.* p. 109 (part.) (1839–44).

Casuarius bennettii, *Schleg.* (*nec Gould*) *Ned. Tijdschr. Dierk.* iv. n. 53 (New Guinea) (1871).

Casuarius papuanus, *Rosenb. in litt.*; *Schleg. t. c.* p. 54 (1871) (type examined); *id. Mus. P.-B.*, Struthiones, p. 11 (Andai) (1873); *Rosenb. J. f. O.* 1873, pp. 390, 391; *Meyer, Sitzb. k. Ak. Wiss. Wien*, lxix. pp. 216, 217 (1874); *Sclat. Ibis*, 1874, p. 417; *id. P. Z. S.* 1875, pp. 85, 87; *Rosenb. Reist. naar Geelvinkb.* pp. 84, 117, 144, pl. xvii. (1875); *Becc. Ann. Mus. Civ. Gen.* vii. p. 717 (1875); *Salvad. ibid.* p. 796 (Andai) (1875); *Sclat. Ibis*, 1876, p. 258; *Harting, Ostriches & Ostr. Farm.* p. 118 (1877); *Oust. P. Z. S.* 1878, p. 389; *Meyer, J. f. O.* 1878, pp. 200, 201, 203, 299; *Ibis*, 1878, p. 482, 1879, p. 96; *Rosenb. Malay. Archip.* pp. 563, 595 (1879); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 210, tav. ii. f. 8 (head) (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 414, n. 7 (1882); *id. Orn. Pap. e Mol.* iii. p. 495 (1882); *Schal. J. f. O.* 1894, p. 20 (egg).

Casuarius kaupi, *Sclat.* (*nec Rosenb.*) *P. Z. S.* 1871, p. 627 (Mansinam), 1872, pp. 147, 149, 150, pl. ix. (Mansinam), 1873, p. 474; *Meyer, Sitz. k. Ak. Wiss. Wien*, lxix. pp. 216, 217 (1874); *Sclat. Ibis*, 1874, p. 417 (note); *Oust. P. Z. S.* 1878, p. 389.

Casuarius papuensis, "*Rosenb.*," *Sclat. P. Z. S.* 1872, pp. 149, 150.

Casuarius westermanni, *Sclat. P. Z. S.* 1874, p. 248 (type examined); *id. Ibis*, 1874, p. 417 (note); *id. P. Z. S.* 1875, pp. 85, 87, 380, pl. xix.; *id. Nature*, xi. p. 516 (1875); *id. Ibis*, 1876, pp. 245, 258; *Harting, Ostriches & Ostr. Farm.* p. 119 (1877); *Sharpe, Ibis*, 1877, p. 325; *Gould, B. of New Guin.* v. pl. 15 (pt. v., 1877); *Meyer, J. f. O.* 1878, pp. 200, 201, 203, 299; *Oust. P. Z. S.* 1878.

p. 389; *Ibis*, 1878, p. 482, 1879, p. 96; *Sclat. List Vert. An.* 7th ed. p. 473 (1879); *id. op. cit.* 8th ed. p. 549 (1883).
Casuarius, sp., *Meyer, Sitzb. k. Ak. Wiss. Wien*, lxix. p. 216 (1874).
Casuarius edwardsii, *Oust. P. Z. S.* 1878, p. 389, pl. xxi. (Dorei); *Salvad. Ann. Mus. Civ. Gen.* xii. p. 425 (1878); *Rchnw. J. f. O.* 1878, p. 203; *Meyer, J. f. O.* 1878, pp. 299, 300; *Sclat. & Salv. Ibis*, 1878, p. 482, 1879, p. 96.

Adult. Feathers of the body black; the casque is blackish, and has the shape of a triangular pyramid, with the posterior surface flat and inclined forwards; no caruncles whatever; head, throat, and fore neck blue; occiput and auricular region greenish grey; hind neck orange, changing into flesh-colour on the naked area of the lower part of the sides of the neck; feet greenish grey; iris blackish. Total length about 55 inches, tarsus 10·22, bill from gape 4·70, nail of inner toe 3·07.

Young. Brown, with the shafts of the feathers blackish.

Hab. North-western New Guinea, from Dorei to Emberbaki.

a. Ad. st. New Guinea. Zool. Soc. (Received 20th Sept., 1871.) (Type of *C. westermanni*, Sclat.)

10. Casuarius picticollis.

Casuarius picticollis, *Sclat. Rep. Brit. Assoc.* 1874, p. 138; *id. P. Z. S.* 1875, pp. 83, 85, pl. xviii. (Milne Bay, S.E. New Guinea), p. 349 (young, Milne Bay); *id. Rep. Brit. Assoc.* 1875, p. 112; *id. J. f. O.* 1876, p. 258; *id. P. Z. S.* 1876, p. 414 (specim. in confinement); *id. List Vert. An.* 6th ed. p. 423 (1877); *Gould, B. New Guin.* v. pl. 14 (pt. v., 1877); *Forbes, P. Z. S.* 1877, pp. 307, 315, 316 (cloaca); *Harting, Ostriches & Ostr. Farm.* p. 121 (1877); *Sharpe, Ibis*, 1877, p. 352; *Meyer, J. f. O.* 1878, p. 203; *Sclat. Ibis*, 1879, p. 96; *Sharpe, ibid.* p. 116 (type); *Sclat. List Vert. An.* 7th ed. p. 473 (1879); *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 243, tav. ii. f. 9 (head) (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 415, n. 8 (1882); *id. Orn. Pap. e Mol.* iii. p. 499 (1882); *Sclat. List Vert. An.* 8th ed. p. 549 (1883); ? *Meyer, Abh. Mus. Dresd.* no. 3, p. 29, taf. 2. ff. 1, 2 (egg) (1893); ? *Schal. J. f. O.* 1894, p. 25 (egg).
Casuarius kaupi, *Sharpe (nec Rosenb.), Ibis*, 1881, p. 500 (S.E. New Guinea).
? Casuarius (beccari ?), *Rams. Pr. Linn. Soc. N. S. W.* viii. p. 27 (egg) (1883).
? Casuarius, sp., *Salvad. Agg. Orn. Pap. e Mol.* p. 213 (1891).

This species is allied to *C. papuanus*, from which it differs in having the throat red, instead of blue, and the hind part of the lower neck light blue, instead of orange.

The type of this species is not fully adult. A fully *adult male* with the naked parts very brightly coloured, collected by Signor Loria at Moroka, is in the Museum of Genoa. From a coloured sketch of the naked parts made by the collector on the spot, I take the following description :—

Casque and base of bill black ; tip of the bill horny black ; throat blood-red, but the chin and the mesial part of the throat flesh-colour, with longitudinal blue stripes on the chin ; ears surrounded with a blue band above and posteriorly, this band extends forwards under the eyes ; below this band there is an irregularly rhomboidal patch of a pale purple ; hind part of the head and nape blue, deeper on the occiput, lighter on the mesial part of the nape and on the lower part of the hind neck ; a red naked patch on the sides of the neck lower down, surrounded with a blue band ; between this red patch and the red throat, on the sides of the neck, there is a triangular purple patch, surrounded with a blue band. Iris hazel-colour ; feet horny grey ; plumage black. Total length about 55 inches, bill from gape 4·70, tarsus 9·60, claw of inner toe 4·90.

Hab. South-eastern New Guinea.

a. Ad. st.	Discovery Bay, S.E. New Guinea.	Zool. Soc. (Rec. 27th May, 1874 ; died 10th Oct. 1876.) (Type of species.)
b. Ad. st.	S.E. New Guinea.	
c. Pull. sk.	Milne Bay, S.E. New Guinea.	H.M.S. 'Basilisk.' (P. Z. S. 1875, p. 349.)

d. Skeleton (imperfect) of specimen *a*.

11. Casuarius bennetti.

The Mooruk.

Casuarius bennetti, *Gould*, *P. Z. S.* 1857, p. 269, pl. cxxix. ; *id. Ann. & Mag. N. H.* (3) i. p. 299 (1858) ; *J. E. Gray*, *P. Z. S.* 1858, p. 271, pl. cxliv. (egg) ; *id. Ann. & Mag. N. H.* (3) ii. p. 469 (1858) ; *Benn. P. Z. S.* 1859, p. 32 ; *Sclat. Ibis*, 1859, pp. 212, 335 ; *Gould*, *B. Austr. Suppl.* pls. 72, 73 (pt. iii., 1859) ; *Bartl. P. Z. S.* 1860, p. 205, pl. clxii. (egg) ; *Sclat. P. Z. S.* 1860, p. 210 ; *id. Ann. & Mag. N. H.* (3) vi. p. 145 (1860) ; *id. Ibis*, 1860, p. 310 ; *Bennett, Gather. of a Natural. in Australas.* p. 243, pl. iv. (1860) ; *Sclat. Ibis*, 1861, pp. 197, 512 ; *id. Trans. Zool. Soc.* ix. p. 359, pl. lxii. (1862) ; *Bennett*, *P. Z. S.* 1862, p. 1 ; *Sclat. P. Z. S.* 1862, p. 324 (pullus) ; *Schleg. Jaarb. zool. Genotsch. Nat. Art. Mag.* 1862, p. 198 ; *Sclat. P. Z. S.* 1863, pp. 234, 518, pl. xlii. ; *Jouan, Mém. Ac. Sc. Nat. Cherb.* ix. p. 323 (1863) ; *Sclat. P. Z. S.* 1864, p. 271 ; *Gould, Handb. B. Austr.* ii. p. 561 (1865) ; *Sclat. Ibis*, 1865, p. 338 ; *id. P. Z. S.* 1866, p. 168 ; *F. Schleg. Zool. Gart.* 1866, p. 178 ; *Jouan, Rev. Zool.* 1867, pp. 75, 76 ; *Sclat. P. Z. S.* 1867, p. 179, 1869, pp. 126, 628, 1871, p. 627 ; *G. R. Gr. Hand-list.* iii. p. 2, n. 9850 (1871) ; *Sclat. P. Z. S.* 1872, pp. 149, 150 ; *Gieb. Thes. Orn.* i. p. 595 (1872) ; *Schleg Mus. P.-B.*, Struthiones, p. 4 (1873) ; *Benn. & Sclat. P. Z. S.* 1873, p. 519 ; *Garrod*, *P. Z. S.* 1873, pp. 470, 644 ; *Rosenb. J. f. O.* 1873, p. 391 ; *Rams. P. Z. S.* 1874, p. 325 ; *Sclat. P. Z. S.* 1875, pp. 85, 87 ; *Sorby*, *P. Z. S.* 1875, p. 362 ; *Sclat. Rep. Brit. Assoc.* 1875, p. 112 ; *id. J. f. O.* 1876, p. 258 ; *Benn. & Sclat. P. Z. S.* 1876, p. 2 ; *Rams. ibid.* p. 122 ; *Sclat. ibid.* p. 414 (live specim.) ; *id. P. Z. S.* 1877, pp. 97, 113 (note) ; *Harting, Ostriches & Ostr. Farm.* p. 123 (1877) ; *Oust. P. Z. S.* 1878, p. 390 ; *Meyer, J. f. O.* 1878, p. 203 ; *Ibis*,

1879, p. 96; *Sclat. P. Z. S.* 1879, p. 5 (note); *id. List Vert. An.* 7th ed. p. 473 (1879); *Layard, Ibis,* 1880, p. 303; *Powell, P. Z. S.* 1880, p. 493; *Salvad. Mem. R. Ac. Sc. Tor.* (2) xxxiv. p. 214, tav. ii. f. 10 (head) (1881); *id. Ann. Mus. Civ. Gen.* xviii. p. 415, n. 9 (1882); *id. Orn. Pap. e Mol.* iii. p. 501 (1882); *Sclat. List Vert. An.* 8th ed. p. 550 (1883); *Evans, Ibis,* 1891, p. 84; *Sharpe, Cat. Osteol. Spec. R. C. S.* iii. p. 438 (1891); *Ost, Zeitschr. f. Ool.* 1892, pp. 15, 94; *Schal. ibid.* p 11; *id. J. f. O.* 1894, p. 20.

Cassowary from the Solomon Islands (*errore*), *Hutton, Ibis,* 1869, p. 352.

Adult. Feathers of the body black; casque black, shaped like a triangular pyramid, with posterior surface flat and inclined forwards; naked skin of head and neck blue, changing into vinous on the lower part of the sides of the neck. Total length about 52·75 inches, bill from gape 4·32, tarsus 8·43, nail of inner toe 2·87–3·54.

Young. Reddish brown, varied with black; naked skin of the neck purple-blue.

Young in down. Rufous, with longitudinal black stripes.

Hab. New Britain.

a. Ad. st.	New Britain.	Purchased.
b. Juv. st.	New Britain.	
c, *d*, *e*. Pull. st.		Zool. Soc.
f. Skeleton.	New Britain.	Zool. Soc.

g. Skeleton (imperfect) of specimen *b*.

Order IV. APTERYGES.

Hallux present; four toes with long nails.

Bill long, somewhat arched, the nostrils near the tip.

Maxillo-palatines as in *Casuarii*, but vomer fused with palatines and pterygoids.

Procoracoid process rudimentary. No clavicles. Tibia with long bony bridge over extensor tendons.

Wings extremely aborted.

No distinct quills or tail-feathers.

Aftershaft absent.

Cæca large.

New Zealand.

The Apteryges, or Kiwis, are the smallest of the Ratitæ, their size exceeding sometimes that of a large fowl. The bill is long and slender, with the base covered by a hard cere, broad and rather depressed; the culmen rounded, very little curved to near the tip, which projects over that of the lower mandible, and is rather obtuse, the sides gradually compressed, and grooved towards the end; the gonys very long and slightly curved; the nostrils placed on each side at the tip, very small and sublinear; the base of the bill furnished with lengthened hairs. Wings rudimentary and covered with feathers. Tail not apparent. Tarsi the length of the middle toe, very robust and covered with variously sized scutes, those in front of the lower part the largest and transverse. Toes three before, with the lateral ones equal, and all covered above with broad scutes; the hind toe very short; claws long, strong, and rather acute.

Only one family.

Family APTERYGIDÆ.

1. APTERYX.

	Type.
Apteryx, *Shaw, Nat. Misc.* xxiv. pl. 1057 (1813)	A. australis.
Apternyx, *Sw. Class. B.* ii. p. 346 (1837) (=Apteryx).	

Range. Confined to New Zealand.

Key to the Species.

a. General plumage brown, the feathers of the upper parts fulvous along the central apical part, and striped with dark brown or blackish on the lateral edges.

a'. Size smaller, under 30 inches; bill white horn-colour.
  a''. Total length about 23 inches; plumage paler, more greyish, feathers soft to the touch ..... *australis*, p. 604.
  b''. Total length about 21 inches; plumage darker, more fulvous brown, the feathers of the upper parts black at the tip, and especially those of the hind neck and back, harsh to the touch ..... *mantelli*, p. 607.
b'. Size larger, total length of male 30·5, of female 33 inches; upper mandible brown horn-colour ..... *lawryi*, p. 606.
b. General plumage greyish brown, barred across with light bands.
  c'. Smaller, total length not more than 25 inches; paler and with narrower bars; tarsi pale brown; claws whitish horn-colour.
    c''. Smaller, total length about 19 inches; dark barring lighter ..... *oweni*, p. 609.
    d''. Larger, total length about 23 inches; dark barrings heavier (*Rothschild*) ..... *occidentalis*, p. 610.
  d'. Larger, total length 25–27 inches; darker and with broader light bars; tarsi dark brown; claws dark horn-colour ..... *haasti*, p. 611.

1. Apteryx australis.

Apteryx australis, *Shaw, Nat. Misc.* xxiv. pls. 1057, 1058 (1813); *Temm. Man. d'Orn.* 2nd ed. i. p. cxiv (1820); *Steph. Gen. Zool.* xiii. 1, p. 71 (1826); *Ranz. Elem. ai Zool.* iii. 9, p. 295 (1826); *Less. Man. d'Orn.* ii. p. 211 (1828); *id. Voy. Coq., Zool.* i. p. 418 (1828) (Bay of Islands); *Cuv. Règn. An.* 2nd ed. i. p. 498 (note) (1829); *Less. Tr. d'Orn.* p. 12 (1831); *Yarr. P. Z. S.* 1833, pp. 24, 80; *id. Trans. Zool. Soc.* i. pp. 71–76, pl. x. (type) (1833); *MacLeay, P. Z. S.* 1835, p. 61; *Yarr. Isis*, 1836, pp. 386–389; *Short, P. Z. S.* 1837, p. 24 (living specimens); *Less. Compl. de Buff.* 2nd ed. *Ois.* p. 71, pl. — (1838); *Owen, P. Z. S.* 1838, pp. 48–51, 71, 72, 105–110 (anatomy); *Cunningh. P. Z. S.* 1839, pp. 63, 65 (habits); *id. Ann. & Mag. N. H.* iv. pp. 312–314 (1840); *id. Fror. Notiz.* xiv. pp. 177–179 (1840); *Owen, Trans. Zool. Soc.* ii. pp. 257–301, pls. 47–55 (1841) (anatomy); *Gould, P. Z. S.* 1841, p. 70; *Owen, P. Z. S.* 1842, pp. 22–41 (myology); *G. R. Gr. List B. Brit. Mus.* iii. p. 55 (1844); *Gray & Mitch. Gen. B.* iii. p. 530, pl. cxxxix. (1846); *Owen, P. Z. S.* 1846, p. 49 (femur); *id. Trans. Zool. Soc.* iii. 1842, pp. 278–301, pls. xxxi.–xxxiv. (myology), pl. xxxv. (female organs) (1849); *Strange, P. Z. S.* 1847, p. 51; *Gould, t. c.* p. 93, 94; *Reichb. Syn. Av.*, Grallatores, t. 143. ff. 1015–16 (1845), Gallinaceæ, t. 386. ff. 2191–92 (*ex Yarrell*), f. 2193 (*ex Gr. & Mitch.*) (1848); *Mantell, P. Z. S.* 1850, p. 211; *Bartl. t. c.* p. 275, pl. xxx. ff. 1, 2 (head and wing), pl. xxxi. f. 1 (foot); *Reichb. Av. Syst. Nat.* p. xxx (1852); *Dareste, Compt. Rend.* xlii. pp. 861–863 (brain) (1856); *id. Institut*, xxiv. p. 167 (1856); *id. Ann. Sc. Nat.* (3) *Zool.* x. pp. 48–50 (1856); *Ep. Compt. Rend.* xliii. p. 841, n. 21 (1856); *Sclat. & Hochst. Rep. Brit. Assoc. Adv. Sci.* 1861, p. 116; *iid. Nat. Hist. Rev.* 1861, p. 504; *G. R. Gr. Ibis*, 1862, p. 233; *Parker, P. Z. S.*

1863, p. 511 (sacral vertebræ); *Hector, New Zeal. Exh.* p. 276 (Otago) (1866); *Hurley, P. Z. S.* 1867, p. 424 (under view of the skull); *Haast, J. f. O.* 1868, p. 243; *Potts, Trans. N. Z. Inst.* ii. 1869, p. 66 (egg) (1870); *Owen, P. Z. S.* 1870, p. 334; *id. Trans. Z. S.* vii. 1870, pp. 381–385, pls. 45, 46 (anatomical details) (1871); *Finsch, J. f. O.* 1870, p. 337; *G. R. Gr. Hand-list*, iii. p. 3, n. 9853 (1871); *Hutton. Cat. B. New Zeal.* p. 23 (1871); *Potts, Ibis*, 1872, p. 36 (var.); *Sclat. P. Z. S.* 1872, p. 861; *Gieb. Thes. Orn.* i. p. 391 (1872); *Finsch, J. f. O.* 1872, p. 263; *id. Trans. N. Z. Inst.* v. 1872, p. 211 (1873); *Schleg. Mus. P.-B.*, Struthiones, p. 7 (1873); *Bull. Hist. B. New Zeal.* p. 365 (1873); *Haast, Ibis*, 1874, pp. 174, 215; *Finsch, J. f. O.* 1874, p. 220 (part.); *Rowl. Orn. Misc.* i. pp. 18, 19, pl. iv. (juv.) (1875); *v. Hügel, Ibis*, 1875, p. 394; *Harting, Ostriches & Ostr. Farm.* p. 178 (1877); *Forbes, P. Z. S.* 1881, pp. 781, 782 (trachea); *Bull. Man. N. Zeal. B.* p. 45, pl. xxii. (1882); *Sclat. List Vert. An.* 8th ed. p. 547, n. 1431 (1883); *Bedd. P. Z. S.* 1885, pp. 188, 189 (heart); *R. Lankester, t. c.* pp. 239, 240 (heart); *Owen, t. c.* pp. 328, 329 (heart), pp. 477–482; *Reischek, Tr. N. Zeal. Inst.* xvii. 1884, pp. 191, 192 (breeding-habits) (1885); *Parker, Ibis*, 1888, p. 127, f. 4 (manus), p. 217; *Bull. Hist. B. New Zeal.* 2nd ed. ii. p. 322 (syn. emend.) (1888); *Smith, Tr. N. Zeal. Inst.* xxi. 1888, p. 223 (1889); *Tristr. Cat. Coll. B.* p. 1 (1889); *Heine & Rehnw. Nom. Mus. Hein. Orn.* p. 305 (1890); *Evans, Ibis*, 1891, p. 83 (incubation); *Lydekk. Cat. Foss. B.* p. 216 (1891); *Sharpe, Cat. Osteol. Specim. B. C. S.* iii. p. 416 (1891); *Bull. Trans. N. Z. Inst.* xxv. 1892, p. 85 (1893); *A. Newt. Dict. of B.* pp. 495, 496, 497 (part 2, 1893); *Rothsch. Bull. Br. Orn. Club*, no. x. pp. lx–lxii (1893); *id. Ibis*, 1893, pp. 574–576.

Emu, *Cruise's Journ. of a Resid. in New Zeal.* p. 318 (1822).

Apterous Penguin, *Lath. Gen. Hist.* x. p. 394 (1824).

Dromiceius novæ-zelandiæ, *Less. Man. d'Orn.* ii. p. 210 (1828).

Emou Kiwikivi, *Less. ibid.*

Apternyx australis, *Sw. Class. B.* ii. p. 346 (1837).

Apteryx fusca, *Potts, Trans. N. Zeal. Inst.* v. p. 196 (1873) *; *id. Zoologist*, (s. s.) 1874, pp. 4014, 4015; *Finsch, J. f. O.* 1874, p. 224; *A. Newt. Dict. of B.* p. 496 (note) (part 2, 1893).

Kiwi, *A. Newt. Dict. of B.* p. 493 (part 2, 1893).

Adult male. Head, neck, and fore part of breast greyish brown; feathers of the upper parts only slightly tinged near the tips with rufous, and streaked with blackish brown on the edges; lower part of breast, abdomen, and inner side of thighs pale greyish brown; long straggling hairs which beset the fore part of the head black: irides black; bill clear white horn-colour; tarsi and toes dark brown; claws the same. Total length about 23 inches; bill along the ridge 3·75, along edge of lower mandible 4·1; tarsus 2·25.

Female. Similar to the male but larger. Total length 27 inches; bill along the ridge 5·5, along the edge of lower mandible 5·8; tarsus 3.

Young. "Has the head and hind neck dark grey, and the rest of the plumage greyish brown, lighter on the underparts, each feather

* Considered by Sir W. Buller to be a synonym of *A. australis*; founded, I suppose, on a melanism of the same.

with a narrow streak of fulvous along the shaft; on the feathers of the upper parts this streak is darker towards the tip, and the terminal filaments are black, whereas on the underparts of the body both the tips and filaments are light brown or fulvous; the bill, which measures two inches in length, is light horn-colour; the legs and feet are light brown, the metatarsi being covered anteriorly with thin scales, scarcely definable to the eye. In this young condition the quill-tubes are very minute, and the plumage of the body is extremely soft to the touch." (*Buller.*)

I may add that in one young specimen examined by me the forehead and throat are of a paler grey than the rest of the head. (*Mus. Rothschild.*)

According to Buller, as a rule, the South-Island birds are larger than those from the North Island (*A. mantelli*), but occasionally examples of the latter are fully equal in size to the largest specimens of *A. australis*. In this species, generally speaking, the long facial hairs or feelers are far less abundant than in the North-Island *Apteryx*. Besides it appears that the feathers of *A. australis* are soft and yielding when stroked towards the head.

Hab. South Island.

a, b. ♂ ad. st. & ♀ sk.	Dusky Bay, New Zealand.	Capt. Stokes [P.].
c. Ad. st.	New Zealand.	Col. Bolton [P.].
d. Juv. st.	New Zealand.	Purchased.
e, f, g. ♀ ad. et juv. sk.	New Zealand.	Colonial Museum [P.].
h. Ad. sk.	New Zealand.	Albert Hunt, Esq. [P.].
i. Skeleton.	New Zealand.	Capt. Stokes [P.].
k. Sternum & pelvis.		Zool. Soc.

(Tr. Z. S. ii. pl. 55. ff. 2, 3, sternum.)

2. Apteryx lawryi.

Apteryx maxima, *Buller* (*nec Bp.*), *Tr. N. Z. Inst.* xxiii. 1890, pp. 602, 603 (1891), xxiv. 1891, pp. 91, 92 (Stewart Island) (1892); *cf. Ibis*, 1894, pp. 127, 128.

Apteryx lawryi, *Rothschild*, *Bull. B. O. Club*, no. x. pp. lxi, lxii (Stewart Island) (1893); *id. Ibis*, 1893, pp. 573, 575, 576.

"The plumage is very similar to that of *Apteryx australis*. The *male* presents more chestnut in the colouring, and the lanceolate markings on the upper surface are more distinct than in the other sex. This richer appearance is due to the feathers having chestnut tips, pointed with black. The bill and feet are likewise darker and more uniform in colour, with lighter claws.

"*Male*. Extreme length, following curvature of the back 20·5 inches; bill along the ridge 5 5, along the edge of lower mandible 5·5; from anterior margin of cere to extreme point of upper mandible 4·5; wing 2·0; tarsus 3·5; middle toe and claw 3·5; hallux 1·0.

The rudimentary wings are furnished at the extremity with a long, slightly curved, greyish-black claw: that on the right wing is 0·75 inch, that on the left is $\frac{1}{4}$ shorter and less curved.

"*Female*. Extreme length, following curvature of the back 33 inches; bill along the ridge 7·75, along the edge of lower mandible 7·75; wing 2·0; tarsus 3·5; middle toe and claw 3·75; hallux 1. The claw or spur on the rudimentary wing 0·50 in length, more curved than that of the male bird, sharply pointed, and of a dark grey colour. The bill is greyish brown, shading into black on the culmen, especially in its apical portion, the tip being whitish horn-colour. Tarsi and toes dark bluish grey, claws paler." (*Buller*.)

Hab. Stewart Island.

I have seen two specimens of this bird, male and female, sent to me for examination by the Hon. W. Rothschild; they are very large, and the female has the bill about an inch longer than any *A. australis* I have seen: besides, the bill in both specimens is darker, horn-brown, especially on the upper part; the claws of the male are brown, but those of the female (of course in dry skin) are pale horn-colour, as in *A. australis*. As the differences, although very slight, appear to be constant, we may keep *A. lawryi* distinct.

3. Apteryx mantelli.

Kiwi, *D'Urville, Voy. Astrol.* ii. p. 137 (1830) (Bay of Tolaga, or Houa-hena, E. coast of N. Island), ii. pp. 480, 481 (1832).

Apteryx australis, *Quoy et Gaim.* (*nec Shaw*), *Voy. Astrol., Zool.* i. pp. 158, 659 (1830) (Bay of Tolaga); *Gould, B. Austr.* vi. pl. 2 (pt. ii., 1841); *Hombr. et Jacq. Voy. Pôle Sud, Atlas*, pls. 24, 25 (1845); *Jacq. & Puch. Voy. Pôle Sud, Ois.* iii. p. 127 (1853); *Hartl. J. f. O.* 1854, p. 166; *Gould, Handb. B. Austr.* ii. p. 568 (part.) (1865); *Bull. Tr. N. Zeal. Inst.* iii. 1870, p. 52, pl. xii *b*. (head) (1871); *Sclat. P. Z. S.* p. 479; *Finsch, J. f. O.* 1874, p. 220 (part.); *Finsch, Ibis*, 1882, p. 399 (King's Country, N. Island).

Apteryx mantelli, *Bartl. P. Z. S.* 1850, p. 275, pl. xxx. ff. 3, 4 (head), pl. xxxi. f. 2 (foot) (North Island); *Newm. Fror. Tagsber.* no. 664 (*Zool.* iii.) pp. 210, 212 (habits) (1852); *Wolley, Zoologist*, p. 3409 (habits) (1852); *Newton, ibid.* p. 3605 (1852); *Bp. Compt. Rend.* xliii. p. 841, n. 22 (1856); *Ed. Ibis*, 1859, p. 115; *Sclat. P. Z. S.* 1859, p. 530 (egg), 1860, p. 194 (egg); *Sclat. & Hochst. Rep. Brit. Assoc. Adv. Sc.* 1861, p. 177; *iid. Nat. Hist. Rev.* 1861, p. 505; *G. R. Gr. Ibis*, 1862, p. 233; *Layard, Ibis*, 1863, p. 242; *Sclat. P. Z. S.* 1863, p. 234 (N. Island), 1864, p. 374 (Auckland! living specimen); *Gould, Handb. B. Austr.* ii. p. 569 (1865); *Finsch, J. f. O.* 1867, pp. 329–331; *Rowl. P. Z. S.* 1867, p. 894; *Ed. Ibis*, 1868, pp. 251, 504 (incubation); *Potts, Tr. N. Z. Inst.* ii. 1869, p. 67 (egg) (1870); *Hutton, Ibis*, 1870, p. 398 (Auckland); *Finsch, J. f. O.* 1870, pp. 337–339 (=australis?); *Buller, Tr. N. Z. Inst.* ii. 1870, p. 52 (=australis) (1871); *Hector, t. c.* p. 73 (1871); *G. R. Gr. Hand-list*, iii. p. 3, n. 9854 (1871); *Hutton, Cat. B. N. Zeal.* p. 23 (1871); *Hector, Tr. N. Z. Inst.*

iv. 1871, p. 363 (1872); *Sclat. P. Z. S.* 1871, p. 496 (=australis?), 1872, p. 861; *Gieb. Thes. Orn.* iii. p. 391 (1872); *Potts, Ibis*, 1872, p. 36; *id. Tr. N. Z. Inst.* v. 1872, p. 194 (1873); *Finsch, t. c.* p. 212 (1873); *Garrod, P. Z. S.* 1873, p. 470 (left carotid only), p. 644 (muscles); *Schleg. Mus. P.-B.*, Struthiones, p. 7 (1873); *Bull. B. N. Zeal.* pp. 357–364, pl. 33 (1873); *Hutt. Ibis*, 1874, p. 43 (N. Island); *Bull. t. c.* p. 122; *Rowl. P. Z. S.* 1874, p. 498; *Garrod, P. Z. S.* 1875, p. 341, with fig. (plantar tendons), pp. 343, 348; *Sharpe, App. Voy. Ereb. & Terr.* p. 36 (1875); *Hector, P. Z. S.* 1876, p. 2 (feather mat); *Forbes, P. Z. S.* 1877, p. 308 (bursa Fabricii); *Harting, Ostriches & Ostr. Farm.* p. 178 (1877); *Nathus. J. f. O.* 1879, p. 255 (egg); *Forbes, P. Z. S.* 1881, pp. 780, 781, figs. 3, 4 (trachea); *Bull. Man. N. Zeal. B.* p. 44, pl. xxi. (1882); *Sclat. List Vert. An.* 8th ed. p. 547, n. 1432 (1883); *Tristr. Cat Coll. B.* p. 1 (1889); *Lydekk. Cat. Foss. B.* p. 217 (1891); *Hartert, Cat. Vogelsamml. Senck. Mus.* p. 248 (1891); *Shäff, J. f. O.* 1892, p. 230; *A. Newt. Dict. of B.* p. 495 (pt. 2, 1893); *Rothsch. Bull. Br. Orn. Club*, no. x. pp. lx, lxi, lxii (North Island); *id. Ibis*, 1893, pp. 573, 574, 576.

Apteryx australis, var. mantellii, *Finsch, J. f. O.* 1872, pp. 263–268; 1874, pp. 172, 220, 221.

Apteryx bulleri, *Sharpe, Proc. Wellingt. Phil. Soc.* 1888, p. 6; *id. Tr. N. Z. Inst.* xxi. 1888, p. 224 (1889) (North Island); *Buller, B. New Zeal.* 2nd ed. ii. p. 308, pl. xlvii. (1888); *id. Tr. N. Z. Inst.* xxv. 1892, p. 85 (1893); *H. Wright, Ibis*, 1893, p. 283; *Rothsch. Bull. Br. Orn. Club*, no. x. p. lx (=mantelli) (1893).

Hybrid.

Apteryx mantelli × A. occidentalis, *Rothsch. Bull. Br. Orn. Club*, no. xvii. p xxxvi (1894); *id. Ibis*, 1894, p. 429.

Adult male. Similar to the male of *A. australis*, but smaller and the feathers of the upper parts more rufous brown and decidedly darker; besides, those feathers, owing to a peculiarity in the structure of the shaft, have stiffened points, and are harsh and prickly to the touch: irides black; bill clear white horn-colour, tarsi and toes pale brown to dark brown. Total length about 22 inches; bill along the ridge 3·75 to 4·25, along the edge of lower mandible 4·25 to 4·85; tarsus 2·5 to 2·75.

Female. Usually of a paler rufous brown. Larger than the male: total length from 25 to 27 inches; bill along the ridge 5·2 to 6, along the edge of lower mandible 5·75 to 6·6; tarsus 2·75 to 3·5.

Young. "Plumage soft and fluffy, and of a uniform dull blackish brown, with the rigid tips of the shafts and the produced hair-like filaments black; paler or greyer on the head and throat: bill shining ivory-white; tarsi and toes delicate grey" (*Buller*).

Hab. North Island.

a. Ad. sk.	New Zealand.	Earl of Derby [P.].
b, c. ♂ ♀ ad. st.	North Island, New Zealand.	
d. ♂ ad. sk.	North Island.	Hon. W. Rothschild [P.].

e. ♀ ad. st.	North Island.	Hon. W. Rothschild [P.].
f. Ad. sk.	North Island.	H. O. Forbes, Esq. [C.].
g. Head.	Taupo Lake.	Dr. Hector [P.].
h. Skeleton.		

4. Apteryx oweni.

Apteryx oweni, *Gould, P. Z. S.* 1847, p. 94 (New Zealand); *id. Ann. & Mag. N. H.* xx. pp. 282, 283 (1847); *id. B. Austr.* vi. pl. 3 (pt. xxxiv., 1848); *id. Trans. Z. S.* iii. pp. 379, 380, pl. 57 (1849); *Mantell, P. Z. S.* 1850, p. 211; *Rchnb. Syn. Av.*, Gallinaceæ, *Novitiæ*, t. 387. ff. 2692–93 (1851) (*ex Gould*); *Bp. Compt. Rend.* xliii. p. 841, n. 23 (1856); *Blyth, Ibis*, 1861, p. 215; *Sclat. & Hochst. Rep. Brit. Assoc. Adv. Sc.* 1861, p. 176; *id. Nat. Hist. Rev.* 1861, p. 505; *G. R. Gr. Ibis*, 1862, p. 233; *Sclat. Trans. Z. S.* iv. p. 362 (1862); *Leadb. P. Z. S.* 1864, p. 1 (juv.); *Schleg. Dierent.* p. 241 (1864); *Hector, N. Z. Exh.* 1866, p. 276 (Otago); *Finsch, J. f. O.* 1867, pp. 329, 346; *Sclat. P. Z. S.* 1868, p. 319 (in confinement); *Haast, J. f. O.* 1868, p. 243; *Sclat. P. Z. S.* 1869, p. 468 (in confinement); *Potts, Tr. N. Z. Inst.* ii. (1869) p. 67 (egg) (1870); *Hutt. Cat. B. New Zeal.* p. 23 (1871); *G. R. Gr. Hand-list*, iii. p. 3, n. 9855 (1871); *Potts, Ibis*, 1872, p. 35; *Gieb. Thes. Orn.* i. p. 391 (1872); *Finsch, J. f. O.* 1872, p. 268; *Schleg. Mus. P.-B.*, Struthiones, p. 8 (1873); *Bull. B. New Zeal.* p. 368, pl. 34 (1873); *Garrod, P. Z. S.* 1873, p. 470 (left carotid only), p. 641 (muscles); *Potts, Tr. N. Z. Inst.* v. 1872, p. 188 (1873); *Haast, Ibis*, 1874, p. 215; *Finsch, J. f. O.* 1874, pp. 174, 220; *Rowl. Orn. Misc.* i. p. 20, pl. ii. (male ad.), pl. v. (young) (1875); *v. Hügel, Ibis*, 1875, p. 394; *Bull. Tr. N. Z. Inst.* viii. 1875, p. 193 (1876); *Harting, Ostriches & Ostr. Farm.* p. 178, pl. — (1877); *Forbes. P. Z. S.* 1881, pp. 781, 782 (trachea); *Bull. Man. N. Zeal. B.* p. 46, n. 50, pl. xxi. *a* (1882); *Sclat. List Vert. An.* 8th ed. p. 548, n. 1433 (1883); *Meyer, Abbild. Vogel-Skel.* p. 42, pl. liv. (1884); *Reischek, Tr. N. Z. Inst.* xvii. 1884, p. 192 (breeding-habits) (1885); *Bedd. P. Z. S.* 1885, p. 189 (heart); *Parker, Ibis*, 1888, p. 127 (manus); *Bull. B. New Zeal.* 2nd ed. p. 327 (part.), pl. lxviii. (1888); *Sclat. P. Z. S.* 1889, p. 161 (Zool. Gard.); *Tristr. Cat. Coll. B.* p. 1 (1889); *Hein. u. Rchnw. Nom. Mus. Hein. Orn.* p. 305 (1890); *Lydekk. Cat. Foss. B.* p. 218 (1891); *Sharpe, Cat. Osteol. Specim. R. C. S.* iii. p. 416 (1891); *Hartert, Kat. Vogelsamml. Senck. Mus.* p. 248 (1891); *Buller, Tr. N. Z. Inst.* xxiv. 1891, p. 90 (Preservation Inlet) (1892), xxv. 1892, p. 86 (1893); *A. Newton, Dict. of B.* p. 495 (pt. 2, 1893); *Rothschild, Bull. Br. Orn. Club*, no. x. pp. lx, lxi, lxii (1893); *id. Ibis*, 1893, pp. 573, 574, 575, 576.

Apteryx mantelli, juv., *Schleg. Strauss. Vög.* 1854 (*cf. Bp. Compt. Rend.* xliii. p. 841).

Apteryx owenni, *Sclat. P. Z. S.* 1871, p. 479, 1872, p. 861 (Zool. Gard.).

? Apteryx mollis, *Potts, Trans. & Pr. N. Zeal. Inst.* v. p. 196 (Martins Bay, West Coast, type in Dunedin Museum) (1873)*;

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* Sir Walter Buller, in the second edition of his 'History of the Birds of N. Zealand,' includes *A. mollis* among the synonyms of *A. oweni*.

id. Zool. (s. s.) 1874, p. 4014; *Finsch, J. f. O.* 1874, p. 224; *A. Newt. Dict. of B.* p. 496 (note) (pt. 2, 1893).

Apteryx fuscus, *Rowl.* (*nec Potts*) *Orn. Misc.* ii. p. 8 (1875) (=oweni, melanistic).

Adult male. Greyish, banded with whitish, the bands less prominent or nearly obsolete on the head, throat, and neck; irides black: bill dark horn-colour; legs and feet pale brown, the claws [whitish] horn-colour (*Buller*). Total length about 12·5 inches; bill along the ridge 2·85, along the edge of lower mandible 3·4; tarsus 1·75.

Female. As a rule, somewhat paler than the male. Total length 20 inches; bill along the ridge 3·5, along the edge of lower mandible 4; tarsus 2·5.

Young. "Plumage very soft, dull greyish brown, obscurely mottled; vertex, sides of the head, and throat greyish white; the light tips of the feathers very conspicuous, having the appearance of small pencilled lines on a darker ground, the produced hair-like filaments being entirely black: bill whitish horn-colour" (*Buller*).

The light marks on the upper parts are V-shaped and are placed on the apical portion of the feathers. (*Rothschild Museum.*)

"*Very young state.* A chick of this species, in the Rowley Collection at Brighton, is of a uniform yellowish-brown colour, with the tips of the feathers lighter" (*Buller*).

Hab. East coast of South Island.

a. Ad. st.	New Zealand.	Dr. Mantell [C.].
b, c. Ad. et juv. sk.	New Zealand.	Capt. Stokes [P.].
d–h. ♂ ♀ ad. et juv. sk.	New Zealand.	Colonial Museum of Wellington [P.].
*i, k.** ♂ ad. et ad. (?) sk.	New Zealand.	Colonial Museum of Wellington [P.].
l. Skeleton.		
m. Skeleton.		Salvin-Godman Coll.

5. Apteryx occidentalis.

Apteryx owenii, *Finsch* (*nec Gould*), *J. f. O.* 1870, p. 339 (W. coast of South Island); *Buller, Hist. B. New Zeal.* (2nd ed.) p. 327 (part.) (1888).

Apteryx occidentalis, *Rothsch. Bull. Br. Orn. Club*, no. x. pp. lix, lxi (1893); *id. Ibis*, 1893, pp. 573, 576.

Apteryx oweni occidentalis, *Rothsch. Bull. Br. Orn. Club*, no. x. p. lxii (1893); *id. Ibis*, 1893, p. 576.

Hybrid.

Apteryx mantelli×A. occidentalis, *Rothsch. Bull. Br. Orn. Club*, no. xvii. p. xxxvi (1894); *id. Ibis*, 1894, p. 429.

Similar to *A. oweni*, from which it differs "in its much larger size (being quite as big as *A. australis*), in its comparatively very

* These specimens are somewhat darker, and have the light bands less defined, than ordinary specimens of *A. oweni*.

small bill, and in the heavy black bars on the feathers" (*Rothschild*).

Hab. "West coast of the South and North Islands" (*Rothschild*).

I have not examined the type of this species, which is still alive; but three specimens from the Buller district, west coast of the South Island, identified by Mr. Rothschild with *A. occidentalis*, and sent to me for examination, show the same characters which are given in the description.

6. Apteryx haasti.

? "Fireman," *Gould, B. Austr.* vi., in letterpress to *Apteryx australis* (pt. ii., 1841); *Strange, P. Z. S.* 1847, p. 51 (Middle Island).

? Apteryx maxima, *Verr. MS.*, Bp. Compt. Rend.* xliii. p. 841, n. 20, p. 1026 (descr. nulla) (1856); *Sclat. & Hochst. Nat. Hist. Rev.* 1861, p. 506; *id. Rep. Brit. Assoc. Adv. Sc.* 1861, p. 177 (Middle Island); *G. R. Gr. Ibis*, 1862, p. 233 (excl. syn.); *Finsch, J. f. O.* 1867, p. 330, 1870, p. 340; *Hutt. Cat. B. New Zeal.* p. 23 (1871); *G. R. Gr. Hand-list*, iii. p. 3, n. 9856 (1871); *Gieb. Thes. Orn.* i. p. 391 (excl. syn.) (1872); *Hector, P. Z. S.* 1874, p. 498; *Rowl. Orn. Misc.* i. p. 23 (1875); *A. Newt. Dict. of B.* p. 496, note (pt. 2, 1893).

? Apteryx major, *Ellman, Zoologist*, 1861, p. 7468; *id. Ibis*, 1861, p. 416.

Apteryx australis, *Haast* (*nec Shaw*), *Topogr. & Geol. Expl.* p. 139 (1861) (W. District of Nelson Prov.); *id. Ibis*, 1862, p. 104 (Nelson Prov.).

Apteryx haasti, *Potts, Tr. N. Z. Inst.* iv. 1871, p. 204 (1872); *id. Ibis*, 1872, p. 35 (Okarito country, W. Coast of Middle Isl.); *Finsch, J. f. O.* 1872, p. 271; *Potts, Tr. N. Z. Inst.* v. 1872, p. 195 (1873); *Finsch, t. c.* p. 212 (1873); *Bull. Hist. B. New Zeal.* p. 371 (1873); *Finsch, J. f. O.* 1874, pp. 174, 220; *Potts, Zoologist*, 1874, pp. 4014, 4158; *Rowl. P. Z. S.* 1874, pp. 497, 498; *id. Orn. Misc.* i. pp. 3–17, pl. i. (ad. female) (1875); *Sclat. P. Z. S.* 1876, p. 1 (Zool. Gard.); *Harting, Ostriches & Ostr. Farm.* p. 178 (1877); *Forbes, P. Z. S.* 1881, pp. 781, 782 (trachea); *Bull. Man. B. New Zeal.* p. 46, n. 57, pl. xxii. (1882); *Sclat. List Vert. An.* 8th ed. p. 548, n. 1434 (1883); *Smith, Tr. N. Z. Inst.* xxi. 1888, p. 224 (1889); *Lydekk. Cat. Foss. B.* p. 217 (1891); *Bull. Tr. N. Z. Inst.* xxv. pp. 63, 87 (albino) (1893); *Kingsley, t. c.* p. 138 (young) (1893); *A. Newt. Dict. of B.* p. 496 (pt. 2, 1893); *Rchnw. J. f. O.* 1893, p. 116; *Rothsch. Ann. & Mag. N. H.* (6) xi. pp. 43, 44 (1893); *Forbes, t. c.* pp. 159–161 (1893); *Rothsch. t. c.* pp. 299, 300 (1893); *id. Bull. Br. Orn. Club*, no. x. pp. lx, lxii (Central South Island and West of North Island) (1893); *id. Ibis*, 1893, pp. 573, 574, 575; *id. Bull. B. Orn. Club*, no. xvii. p. xxxvi (1894); *id. Ibis*, 1894, p. 429.

? Apteryx maximus, *Rothsch. Bull. Br. Orn. Club*, no. x. pp. xli, xlii (1893) (South Island!); *id. Ibis*, 1893, pp. 574, 575, 576.

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* It appears to me that the name *A. maxima* was invented for the "*Fireman*," but, according to Bonaparte, it is based on a description given by natives, and on the inspection of an egg which J. Verreaux assured Prince Bonaparte was preserved in the Museum of Philadelphia (!).

Similar to *A. oweni* and *A. occidentalis*, but much larger, of a darker brown colour and with the light bands broader: "irides black; bill white horn-colour; legs and feet dark brown, changing to brownish black on the posterior aspect of the metatarsi and on the soles; claws dark horn-colour. Total length about 25 inches; bill along the ridge 4·75, along the edge of lower mandible 5·4; tarsus 2·75." (*Buller.*)

The *female*, as in the other species, is larger than the male. Total length 27 inches, culmen 5·4.

Chick. Similar to that of *A. oweni*, but the brown portion of the feathers a shade darker. (*Mus. Rothschild.*)

Hab. Central South Island and West of North Island.

a. Ad. sk.	New Zealand.	Baron F. von Müller [P.].
b. ♂ ad. sk.	South Island.	Purchased.
c. ♂ ad. st.	South Island.	Purchased.

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Nothoprocta pentlandi, p. 555	Pl. XVI.
Nothoprocta ornata, p. 557	Pl. XVII.
Nothura marmorata, p. 561	Pl. XVIII.
Nothura darwinii, p. 562	Pl. XIX.

* More correctly *Rhynchotis*.

J. G. Keulemans, del. et lith. Mintern Bros. Chromo lith.

Dendrocygna guttulata

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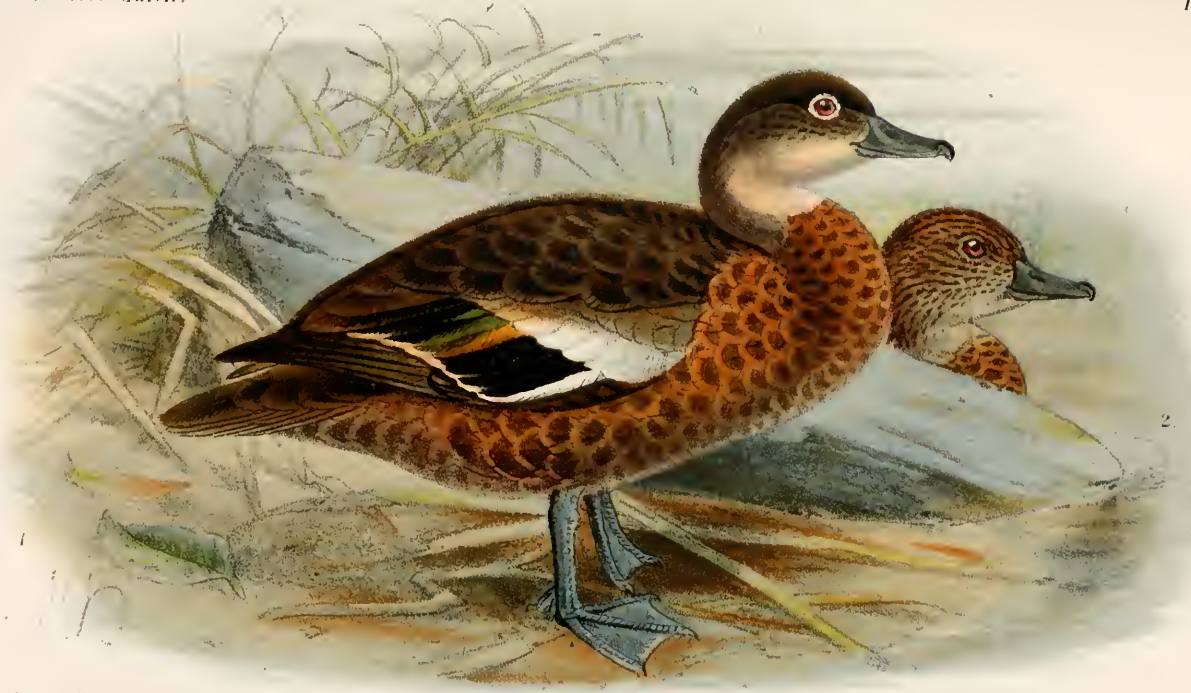
NATURAL HISTORY



J. G. Keulemans del. et lith. Mintern Bros. Chromo.

1. Nettion albigulare. *2. Nettion gibberifrons.*

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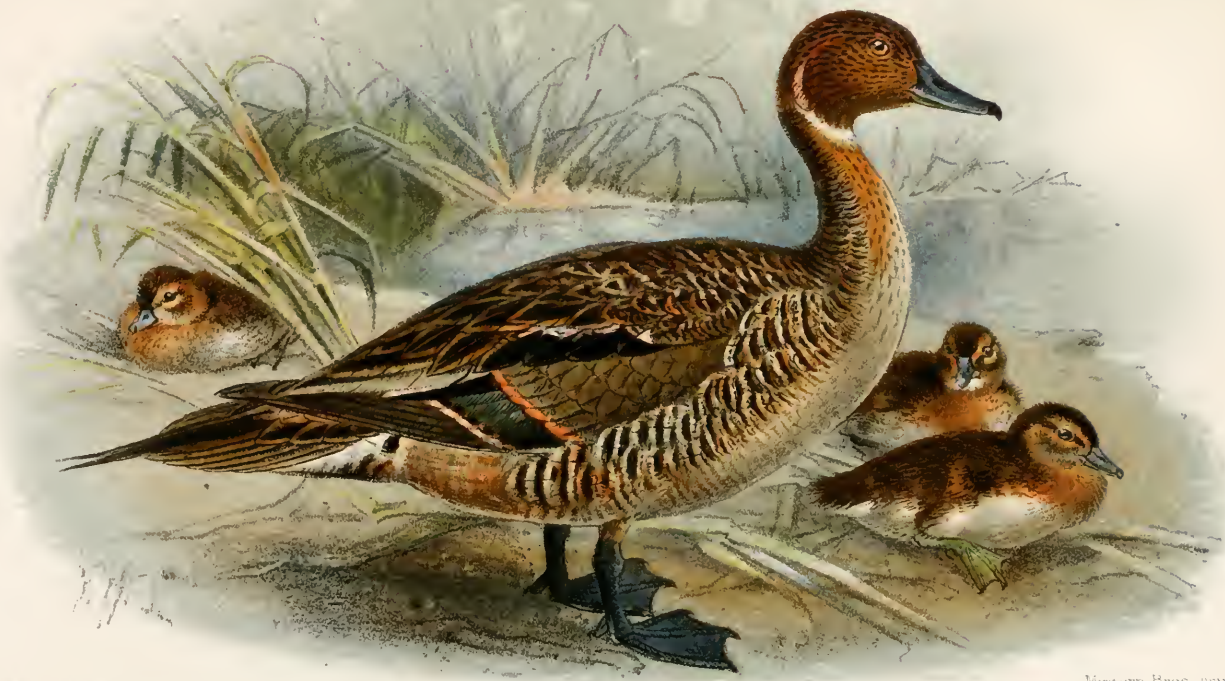

J. Keulemans del et lith. Mintern Bros. imp.

Dafila eatoni.

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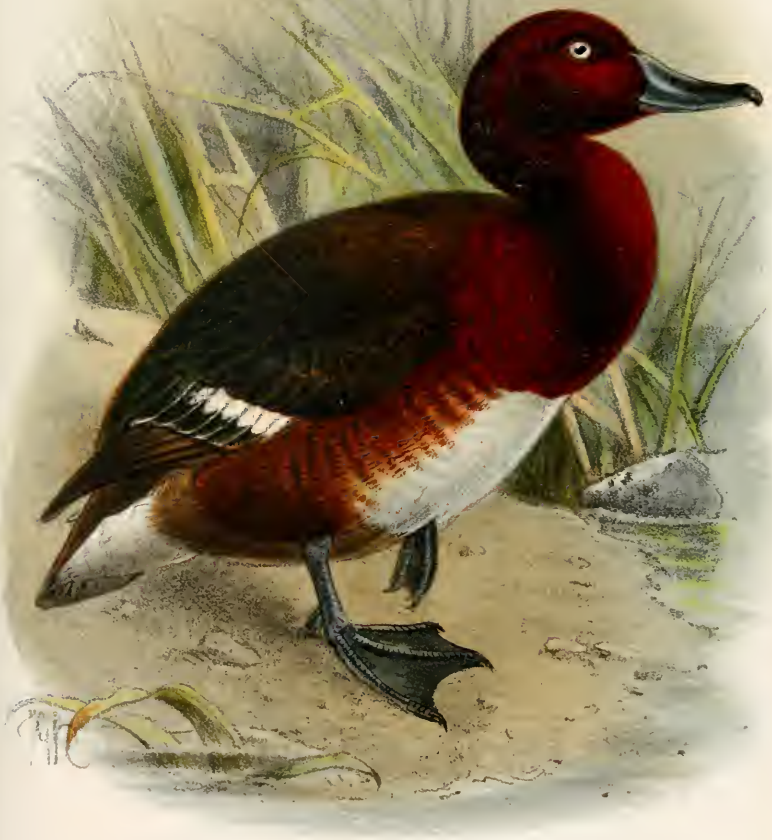

J. G. Keulemans ad. et lith. Mintern Bros. Chromo lith.

Nyroca innotata.

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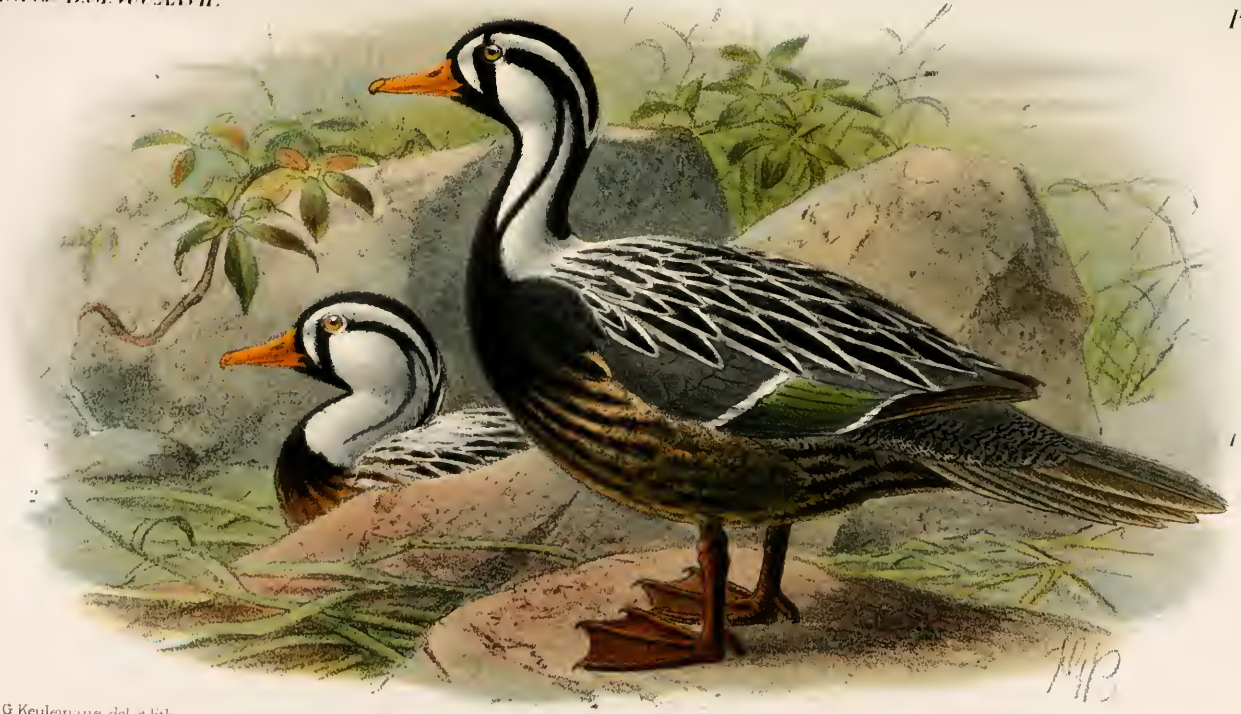
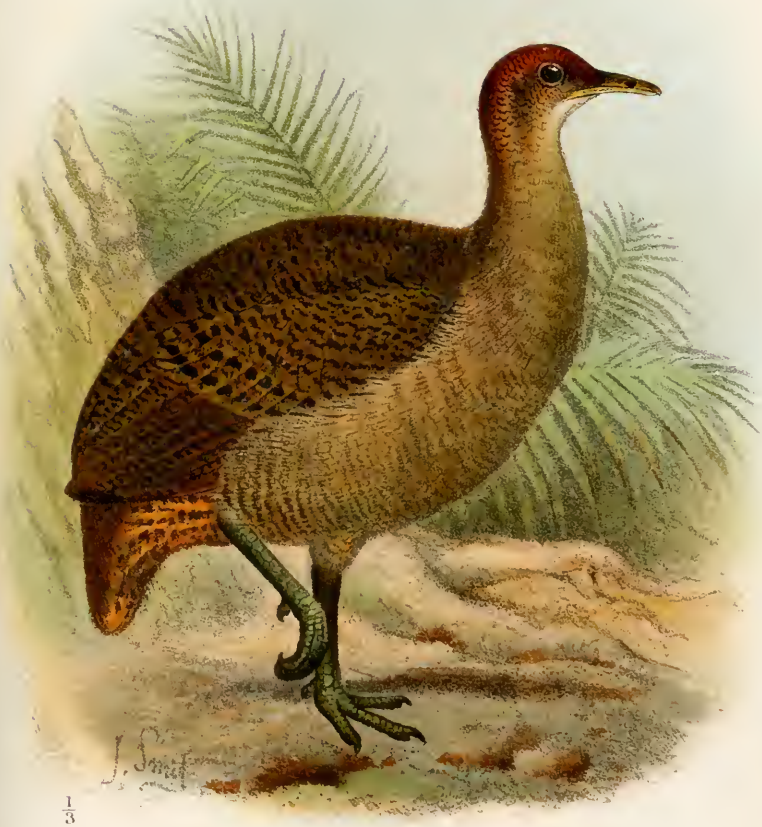
NATURAL HISTORY



J. G Keulemans del. et lith.

1. *Merganetta frenata*. 2. *Merganetta armata*

Mintern Bros. Chromo lith.



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Tinamus castaneiceps.

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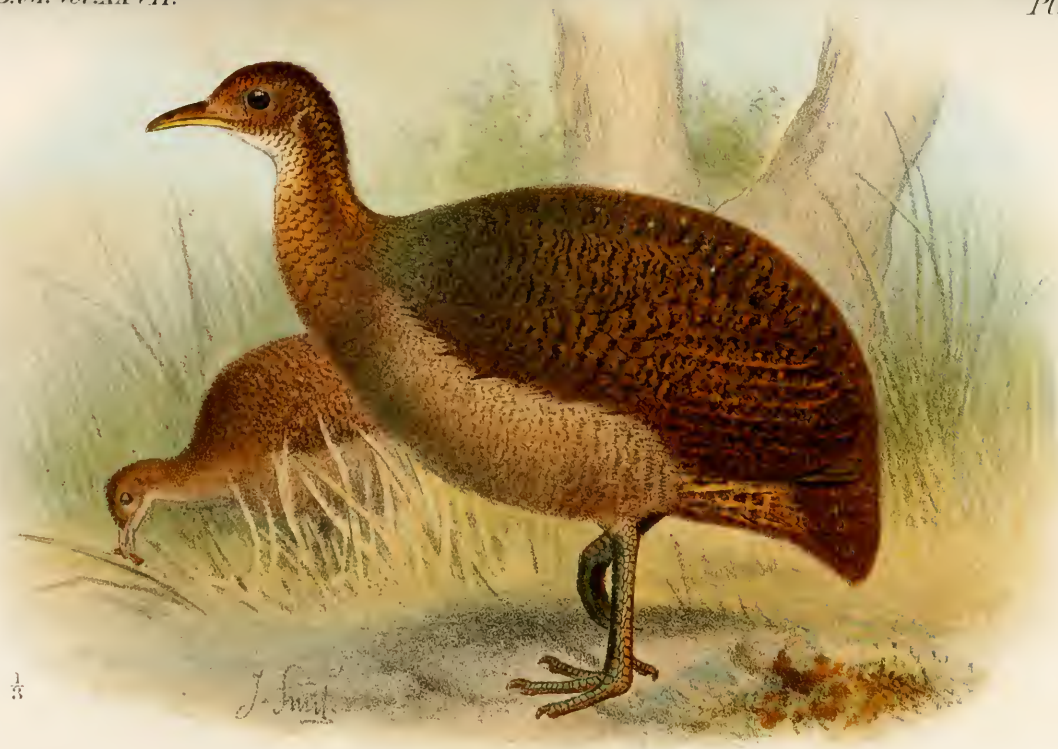

Riddle & Couchman, chromo lith.

Tinamus solitarius.

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NATURAL HISTORY

Riddle & Couchman, Chromo lith

Nothoercus nigricapillus.

BRITISH MUSEUM
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NATURAL HISTORY

1/2

Riddle & Couchman imp.

Crypturus castaneus.

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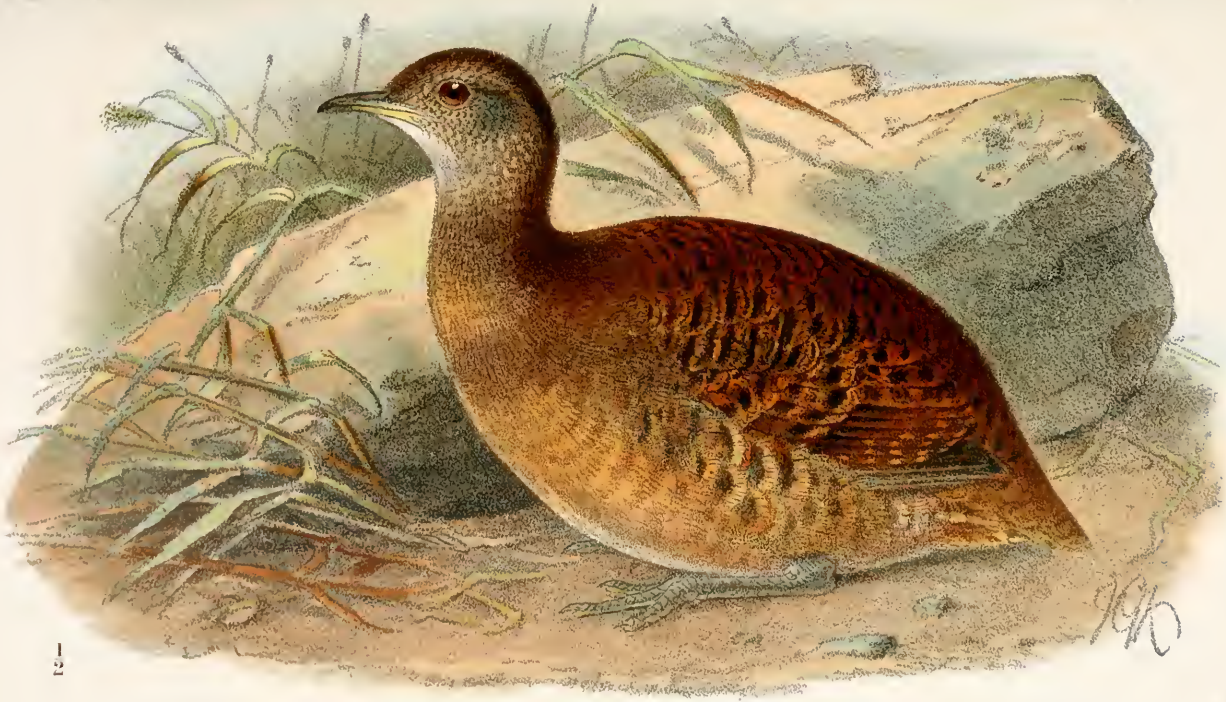
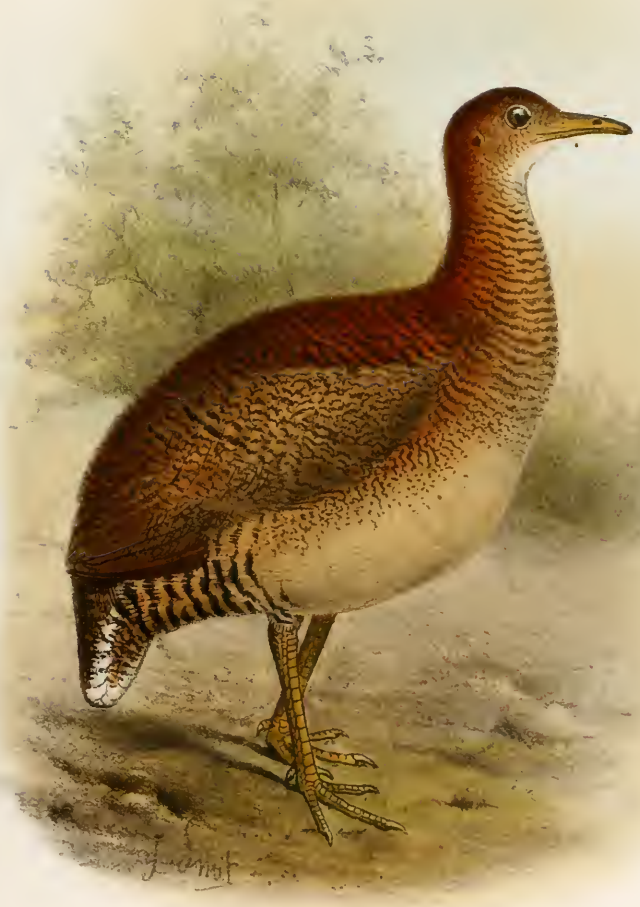
Crypturus erythropus.



Crypturus bartletti.

Ribble & Couchman Chromo lith.

BRITISH MUSEUM
NATURAL HISTORY



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J. Smit del. et lith. Mintern Bros. imp.

Cryptarus scolopax.

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NATURAL HISTORY
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Crypturus balstoni

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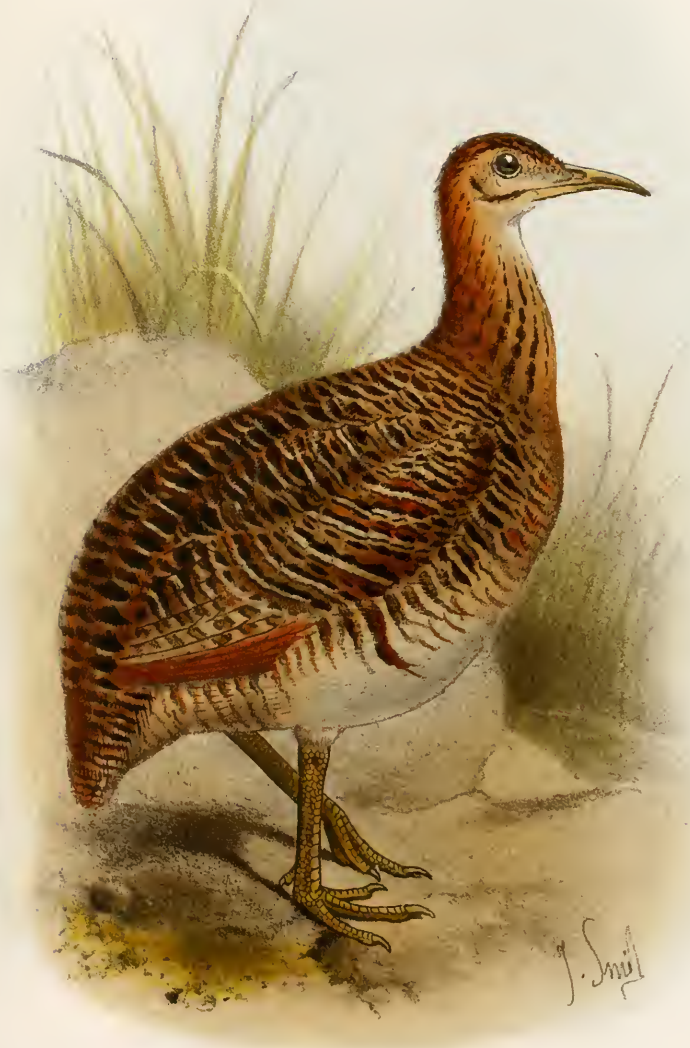

J. Smit del et lith. $\frac{1}{3}$ Müntern Bros. Chromo lith.

Rhynchotis macidicollis.

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NATURAL HISTORY
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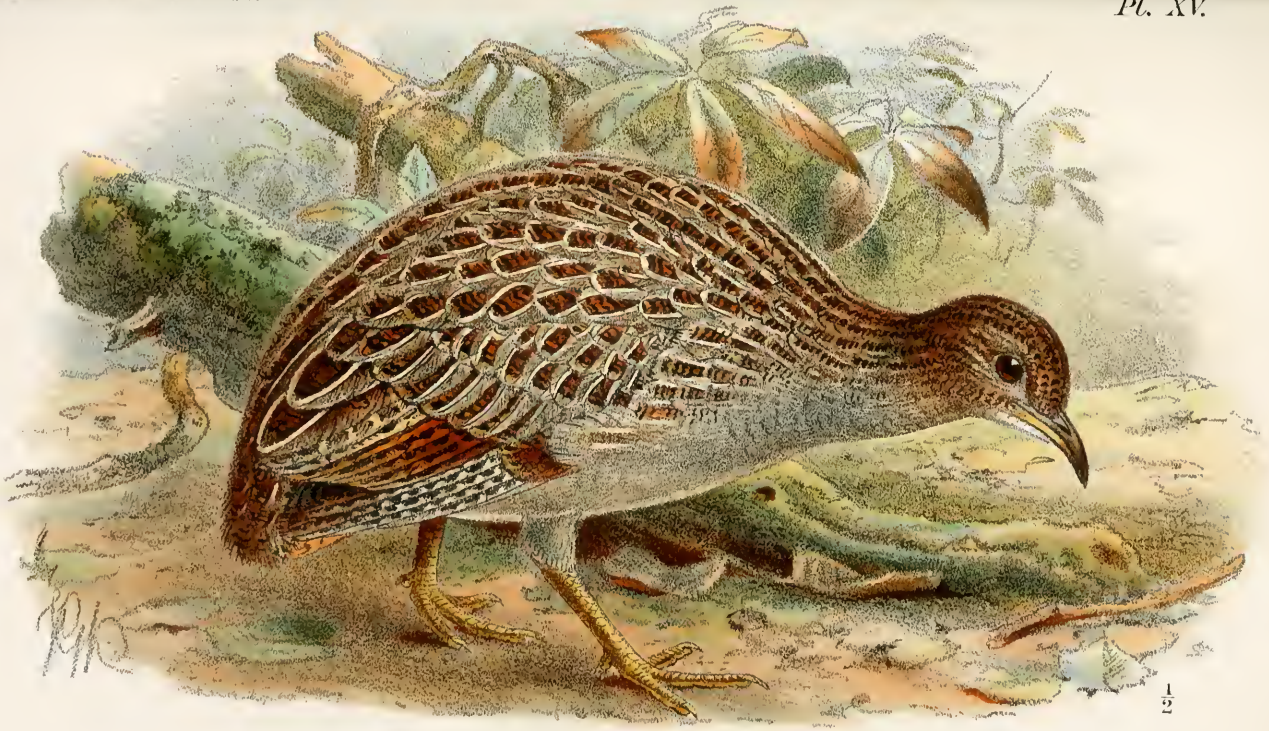

Nothoprocta coquimbica.

Riddle & Couchman, chromolith

BRITISH MUSEUM
NATURAL HISTORY

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J. Smit. del et lith. Mintern. Bros. Chromo lit.

Nothoprocta pentlandi.

BRITISH MUSEUM
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NATURAL HISTORY

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J. Smit del. et lith. Mintern Bros. Chrome Itho.

Nothoprocta ornata.

BRITISH MUSEUM
NATURAL HISTORY

J. Smit del. et lith.

Nothura marmorata.

Mintern Bros. Chromo lith.

BRITISH MUSEUM
NATURAL HISTORY
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J. Smit del et lith. Mintern Bros. Chromo lith.

Nothura darwinii.

23 JAN 1896